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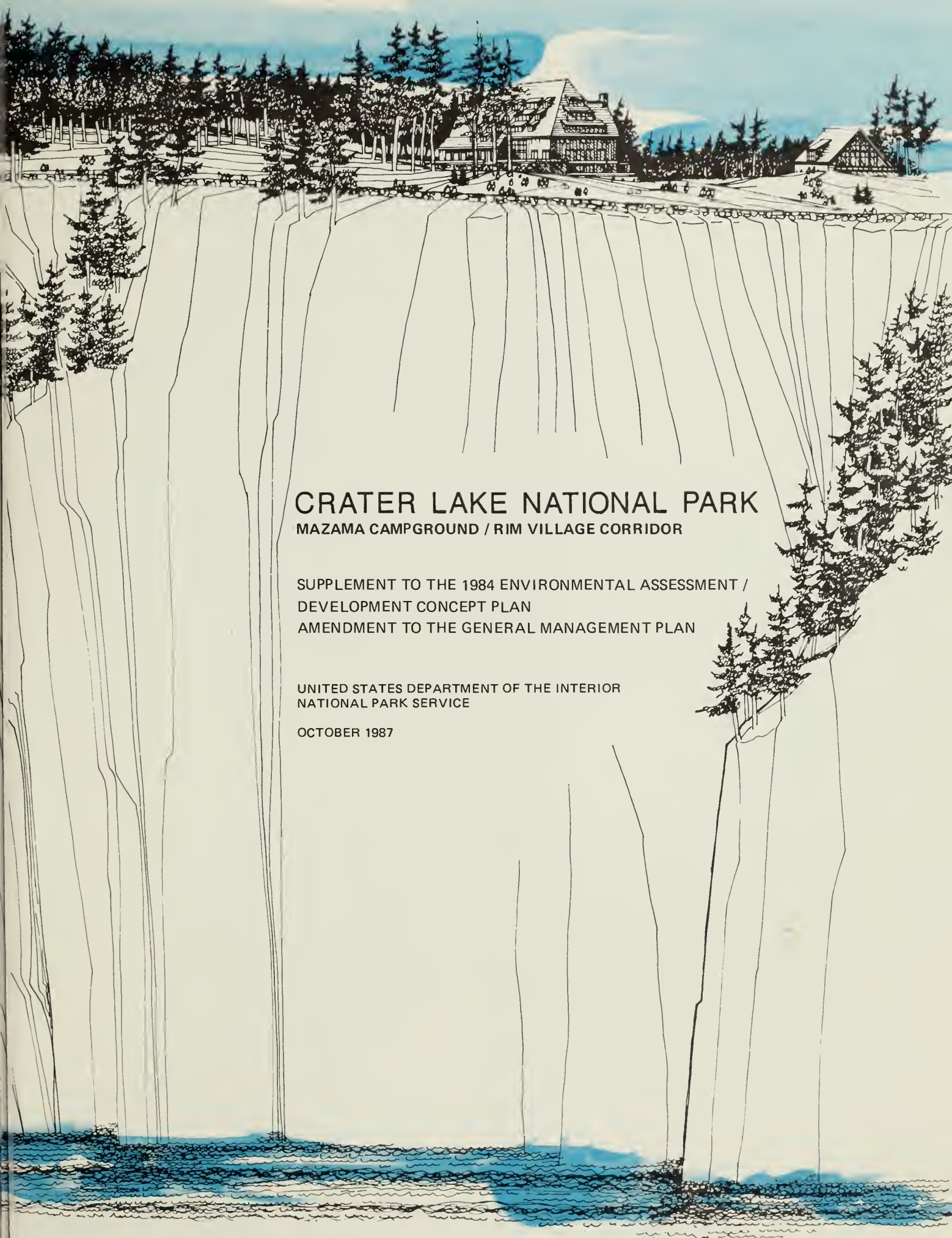
SUPPLEMENT TO THE 1984 ENVIRONMENTAL ASSESSMENT /
DEVELOPMENT CONCEPT PLAN /
AMENDMENT TO THE GENERAL MANAGEMENT PLAN

COMPARISON OF EXISTING LODGE AND CONCEPT FOR NEW RIM VILLAGE DEVELOPMENT



CRATER LAKE NATIONAL PARK

MAZAMA CAMPGROUND / RIM VILLAGE CORRIDOR

SUPPLEMENT TO THE 1984 ENVIRONMENTAL ASSESSMENT /
DEVELOPMENT CONCEPT PLAN
AMENDMENT TO THE GENERAL MANAGEMENT PLAN

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

OCTOBER 1987

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PURPOSE OF AND NEED FOR ACTION

The purpose of the Mazama Campground/Rim Village corridor development concept plan is to resolve the issues of lodging and camper service facilities in these areas. The plan is needed to maintain and improve essential visitor services and to provide direction for future development. The purpose of this supplement and subsequent public meetings is to provide a forum for public comment on the issues and alternatives to assist National Park Service management in making a decision about future development in the Mazama and Rim Village areas of the park.

BACKGROUND

The General Management Plan for Crater Lake National Park (GMP), approved in 1977, contained several proposals for improvement of the park environment and visitor services. However, the GMP left the question of lodging open for resolution at such time as the existing lodge had outlived its useful life.

In the winter of 1984 the National Park Service released the Environmental Assessment/ Development Concept Plan/ Amendment to the General Management Plan with proposals for new lodging and camper service facilities in the corridor from the Mazama campground to the Rim Village. The alternatives also addressed the development of interpretive facilities, camper service facilities and cabins at Mazama campground (to replace the cold-water cabins in the Rim Village), and the connection of all Rim Village facilities to the Munson Valley wastewater treatment system.

Alternative A in that document proposed removal of all development from the Rim Village except the Sinnott Memorial; a new lodge and cabins would have been developed in the Mazama/Munson Valley area. Alternative B proposed development of an interpretive center in the Rim Village with limited food service; lodging and other facilities would have been developed that were similar to those in alternative A. Alternative C, the National Park Service's preferred alternative from the 1984 assessment, included a new ±58-room lodge in the Rim Village for year-round use, which would incorporate an interpretive center and day-use facilities, budget cabins at Mazama, and medium-priced cabins at Goodbye Creek. Various adaptive uses were presented for the existing Crater Lake Lodge, but a final decision was left to future studies. Based on a historic structure report and preliminary design completed in 1981, the 1984 assessment assumed that the existing lodge would not be rehabilitated for lodging. In addition, a no-action alternative was presented. (Readers are referred to the 1984 environmental assessment for a detailed description of the previous alternatives.)

Although alternative C was well accepted by a majority of those who commented, significant public concern was also expressed at that time that the historic lodge and its rustic character would not be preserved under

this proposal and that the study for rehabilitating the lodge had been based on a "deluxe" lodging standard. In response to this concern, the National Park Service (NPS) agreed to restudy alternatives for the lodge. The Park Service contracted for an independent study for the cost of rehabilitating the lodge to a minimum or rustic standard of accommodation and to provide information for further analysis of possible adaptive uses or partial rehabilitation. (See synopsis of this study in appendix A for detailed information.) Additional studies by NPS staff and consultants were also done, and information was developed for other options for rehabilitation or adaptive uses of the existing lodge and for improvements in the Rim Village area. As a result of these studies, additional alternatives are being presented in this supplement.

Other elements of the alternatives presented in the 1984 assessment were not controversial. These included restoration of a pedestrian environment by relocating parking in the Rim Village, development of an interpretive center, and connection of Rim Village facilities to the Munson Valley wastewater treatment system. Also not controversial were the replacement of the dilapidated cold-water cabins with new cabins near the Mazama campground, development of a camper services facility, and relocation of the gas station to the campground area. Most of those commenting agreed that some year-round lodging of various price ranges should be provided in the park.

In April 1985, an Interim Development Concept Plan incorporating the noncontroversial elements of the 1984 assessment was released for public comment and subsequently was approved by the regional director. This has allowed planning for needed improvements to proceed while the lodge issue is being resolved. (That interim plan is incorporated in this document by reference and should be referred to for details of those actions.)

This supplement to the 1984 assessment addresses the issues of lodging, interpretive facilities, day use facilities, rehabilitating the existing lodge, and redevelopment of the Rim Village area. A preferred alternative is not presented. Three of the four alternatives include continued use of the existing lodge.

The alternatives in this document are based on the following objectives from the 1984 assessment (see table 1 at the end of the "Alternatives" section):

To provide a quality year-round lodging experience

To provide a quality year-round interpretive program

To reduce visual intrusion, congestion, and pollution in the Rim Village

To reduce environmental impacts in the Rim Village area that could affect the Crater Lake ecosystem

The environmental impacts of these alternatives are also presented, thus fulfilling the requirements for a compliance document for public comment.

Following public review of this supplement, a preferred alternative will be selected. If it is determined that there is a potential for significant affect on the human environment, a notice of intent to prepare an environmental impact statement will be issued. Otherwise, a summary of comments, the rationale for the selection of the preferred alternative, and a finding of no significant impact will be prepared and distributed for comment. A final development concept plan will be incorporated in a revision of the park's general management plan.

ISSUES AND CONCERNS

The main issues in this document are providing adequate and safe lodging for visitors to Crater Lake National Park, the future use or removal of the existing historic Crater Lake Lodge (which is structurally defective, provides marginal accommodations, is energy inefficient, and does not meet current building codes and life-safety standards), and the accompanying redesign and redevelopment of the Rim Village area. The existing NPS facilities are extremely limited in the Rim Village area, and most are old, in ineffective locations, and inadequate.

SCOPE OF ANALYSIS

This Supplement to the 1984 Environmental Assessment/Development Concept Plan describes four alternatives that could be implemented at Crater Lake National Park. Alternatives I, II, and III recommend complete or partial rehabilitation of the existing lodge for summer use; alternative IV recommends its removal. Alternatives II, III, and IV recommend constructing a new lodge for year-round use. All alternatives recommend

- constructing a year-round interpretive center in the Rim Village area (with a multipurpose room/auditorium, information area, sales area, exhibits, and restrooms)
- constructing a camper services facility and cabins in the Annie Spring/Mazama campground area (first phase scheduled for 1988)
- providing concessioner employee housing in the Munson Valley area
- keeping the Sinnott Memorial and exhibit building for summer interpretive programs
- removing all parking areas and roads adjacent to the caldera in the area of the Rim Village (restoring the area to a pedestrian environment),
- continuing the concessioner services in the Rim Village
- connecting all facilities to the Munson Valley wastewater treatment facility

The treatment of the existing lodge is, essentially, the major difference among the alternatives.

This document also evaluates the direct and indirect environmental conseqences of the various alternatives and related visitor use. The topics addressed are the impacts on the natural, cultural, and socioeconomic environments and the impacts on park management. Preparation of this supplement is in compliance with the National Environmental Policy Act of 1969 and its implementing regulations, the National Historic Preservation Act of 1966, as amended, the Endangered Species Act of 1973, the Rehabilitation Act of 1973, and all applicable executive orders.

EXISTING CONDITIONS

PARK LOCATION AND ACCESS

Crater Lake National Park is in southwest Oregon at the south end of the Cascade Range. It lies in an area with a long history of volcanic and glacial activity extending from Lassen Peak in northern California northward into Canada. Crater Lake itself occupies the collapsed caldera of the once majestic Mount Mazama.

Crater Lake is 4.5 to 6.0 miles across, has 20 miles of shoreline, a surface area of 21.5 square miles and is, with a depth of 1,932 feet at its deepest point, the deepest lake in the United States. It is known for the clarity and intense blue color of its waters.

The park entrance at Annie Spring is 76 miles from Medford and 56 miles from Klamath Falls and can be reached by state highway 62 or from the north by highway 138. Park roads lead from intersections with the above highways into the park where they meet the 33-mile Rim Drive encircling the lake. Winter access is maintained only from the south and west on highway 62, through the Munson Valley headquarters area and up to the Rim Village area. Road closures, particularly between the headquarters and the rim, are common during the winter; closures of up to three days are not unusual. Snowmobile use is permitted on the north entrance road between highway 138 and the junction with the Rim Drive.

VISITOR USE

July and August are the most popular months to visit Crater Lake, and visitation can be fairly high in June and September, depending on road openings in June and weather conditions in the fall. Winter use, particularly on weekends, has been increasing because of the popularity of cross-country skiing, snowmobiling, and general snow play. Relatively few visitors come just for sight-seeing during the winter. It is not uncommon for some park facilities to remain inaccessible into June, and major snowstorms have closed the park road temporarily soon after Labor Day.

In 1986 there were 403,000 visitors to the park, with 75 percent of the visitation occurring between Memorial Day and Labor Day. Visitation figures have been relatively stable, with an average of 460,500 visitors annually since 1982. Studies have indicated that 85 percent of the visitors remain in the park less than eight hours, and 65 percent remain less than four hours. Seventy-five percent of this visitation occurs between 10:00 a.m. and 3:00 p.m. and is concentrated in the Rim Village area. Based on averages, over 3,800 people pass through the Rim Village facilities daily during July and August. On peak visitor days, at least 1,000 vehicles move through the parking area near the rim.

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Summer visitors to the Rim Village area spend their time shopping and eating at the concessioner facility, walking along the rim of the caldera to view the lake, and viewing the limited exhibits in the exhibit building. A smaller percentage walk down to the Sinnott Memorial to view the exhibits and listen to talks by naturalists. Some visitors participate in the guided walks and other interpretive programs; a slide or movie program is presented each evening in the community building and also at Mazama campground.

The four-year (1982-1985) average for winter use is 9,380 visitors per month. However, visitation varies considerably from month to month and year to year. Cross-country skiing has been increasing in popularity, and it is not uncommon to have 500 to 700 skiers on a good weekend. Other winter visitors come to enjoy the beauty of the park and see the lake. Families or friends of skiers who are not skiing may spend a good portion of the day in the cafeteria building, the only sheltered place to escape the weather.

A winter use study conducted in 1980 by the National Park Service reaffirmed the desirability of maintaining winter access to the Rim Village area and providing the opportunity for cross-country skiing, snowshoeing, and restricted snowmobiling. Although winter lodging in the park did not appear to be in great demand, it was concluded that the demand would grow and that some winter lodging should be provided if economically and operationally feasible. The desire for winter lodging was reaffirmed during the public meetings on the 1984 assessment.

VISITOR SERVICES AND FACILITIES

Crater Lake National Park provides a variety of visitor services and facilities. Although most visitors come to the park just to see the lake, some also stop at pullouts along park roads and participate in interpretive programs, which are offered primarily in the Rim Village area.

Mazama campground (198 sites), currently operated by the park concessioner, has modern, cold-water comfort stations and an amphitheater for evening programs. Major complaints are the lack of hot water and showers.

Most of the facilities in the Rim Village and Munson Valley headquarters areas were developed between 1910 and 1940 and are outmoded. Major improvements are in progress for NPS administrative facilities in Munson Valley. Upon completion, the park will have vastly improved facilities for administration, research, library and study collections, and visitor information.

The Rim Village development is a complex of isolated structures connected by a network of roads, extensive parking areas, and walkways. Although the area was originally developed in the late 1920s and 1930s as a pleasant rim promenade from which to view the lake, increasing visitation led to periodic expansion of parking and facilities. Now

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pedestrians along the rim are constantly bombarded by the sight, sound, and smell of vehicle traffic and must cross busy traffic lanes and parking areas to reach lake viewpoints and scattered facilities. The approved GMP calls for restoration of the Rim Village area to a more natural, pedestrian environment, with the relocation of parking and removal of roads. The GMP also recognizes the need for an interpretive focal point in the park and a safe means to view the lake in the winter. Although the beauty of the lake and many natural features are best conveyed on-site, the complex forces shaping this natural wonder and its biotic/geologic associations are probably best interpreted through various media in a structured setting.

The concessioner, Canteen Company of Oregon, operates the 80-room Crater Lake Lodge and two four-plex cabins (eight units) behind the cafeteria building. (The cold-water cabins were removed in 1986.) The remaining cabins are to be removed by the concessioner when replacement cabins are constructed adjacent to Mazama campground. Lodging is available for approximately 90 days during the summer season. The lodge contains many substandard rooms and has major structural defects and life/safety code violations (see appendix A and reports on file at park headquarters, the regional office, and the Denver Service Center). Corrective measures have been taken to minimize safety problems, but a total rehabilitation is required to replace obsolete systems and materials. Structural failure of the lodge during the winter remains a possibility unless extensive reinforcement is undertaken. Movement of the structure because of heavy snow loads causes damage requiring annual repairs.

The concessioner also operates a snack bar/cafeteria/curio shop in the Rim Village on a year-round basis, runs a summer gas station in Munson Valley, and provides bus tours around the Rim Drive and boat tours on the lake. Park interpreters provide informative narration during the boat tours. In the winter, ski equipment rentals are available and food service is limited to light meals and snacks in the cafeteria. The cafeteria building began as a small, rustic structure and has been expanded to meet the needs of increasing numbers of visitors. The present configuration of the structure traps snow between the wings, causing eccentric loading on the structure and considerable building movement.

In the Rim Village, NPS facilities are extremely limited. A community building, also referred to as the Rim center, serves as an auditorium during the summer and has served as the ski center during the winter. Although the community building provides a place for interpretive programs, the facilities are minimal and the location does not attract heavy use. The structure also lacks adequate fire exits and has suffered damage from eccentric and/or excessive snow loads.

The exhibit building, a small structure on the rim above the Sinnott Memorial (also known as the Rim visitor center), is in an obscure location and visitation is low. This has been the main contact point between NPS personnel and park visitors (other than at entrance stations). The building contains a small information desk, publication sales area, and

minimal exhibits, but is not currently being used. In the winter, the building has been used as a cross-country ski center, where the concessioner rents ski and snowshoe equipment and provides lessons and guide services.

The Sinnott Memorial, a small structure below the rim, offers a spectacular view of the lake. Talks on the formation of the lake are given, and a small exhibit room emphasizes the geological processes that created the lake. Access is difficult for some because of the steep path and stairs, and the memorial is only open during the summer.

Viewing the lake in the winter can be hazardous because of the huge piles of snow that accumulate along the rim from plowing operations. Weather conditions, particularly wind, contribute to the problem of safely viewing the lake. Currently, a road culvert is placed on supports at the edge of the rim to form a tunnel through the snow bank, providing an unattractive, though somewhat protected, means to view the lake. In some winters, heavy snows completely cover the view end of the tunnel, making it unusable for part of the season.

The lodge and employee dormitory are connected to a wastewater treatment system in Munson Valley. Other facilities are connected to a septic tank/leachfield system southwest of the cafeteria. Because of the potential for pollutants to enter the lake, all facilities in the Rim Village will be connected to the Munson Valley wastewater treatment system.

Visitor facilities in Munson Valley have been limited to a small information desk and a six-seat slide viewing room at park headquarters. Recent remodeling of the former ranger dormitory has also provided an improved information/program area with exhibit, publication sales, and audiovisual program spaces. These facilities are inadequate to serve as the primary interpretive center for the large summer crowds, but are a vast improvement over the previous facilities and, in particular, will provide a place for winter visitors to learn about the park resources when the road to the rim is temporarily closed.

RIM VILLAGE

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EXISTING CONDITIONS / RIM VILLAGE

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GEOLOGY

Detailed information on Crater Lake geology is found in the 1977 General Management Plan. The present form of the Crater Lake area is the result of a violent volcanic history, intermixed with glacial advances and retreats. The area shows a temporal sequence of volcanic and glacial activity. Barring a reactivation of volcanic processes, there are few geologic hazards within the park. The area is seismically active, but tremors and microquakes are detectable only by delicate instruments.

The primary hazard occurs from gradual erosion of the caldera wall, which varies considerably with its composition. Erosion is quite evident in portions of the Rim Village where soft surface materials overlie a tilted, unstable rock layer; other areas are stable and show little effect from erosion. Stable areas can be seen in contrast to unstable areas where very old trees exist a few feet from major slides. In some areas, portions of the rim have receded severely, requiring relocation of walls and walkways. The rim in front of the lodge and opposite the cafeteria is gradually receding; other areas in the village remain stable. Inclinometers were installed in 1981 to evaluate the stability of the rim in the lodge area. Readings did not indicate any significant movement threatening the lodge with catastrophic failure, but did indicate that the minor, continual movement contributes to maintenance problems. Facilities away from the rim have not shown signs of being affected by ground movement, indicating that these areas are relatively stable. Based on the underlying structure of the caldera wall in much of the Rim Village area, major structures must be carefully located to avoid future problems. Today, the lodge would not be built in its present location. In contrast, the Sinnott Memorial appears to have been built in a stable location.

TOPOGRAPHY/SOILS

The sites under consideration for development are relatively flat with slopes of less than 10 percent except in the cafeteria area, which has been modified through the years to create level parking terraces and building sites. The elevations range from 6,200 feet at Mazama Campground to 7,100 feet at the Rim Village.

The soils in the area developed on the surface of Mazama pumice, alluvium, and glacial debris. In general, the soils are considered regosols, with poorly defined soil horizons. Most, if not all, of the soils are excessively drained, with permeability of 6.0 to 20.0 inches/hour. Soil type is not a major influence in determining vegetation types. However, the rapidly draining soils and low rainfall during the growing season present a problem when attempting vegetation restoration in disturbed areas because little moisture is available when most needed by the plants.

CLIMATE/AIR QUALITY

Crater Lake National Park is near the midpoint of the Sierra Cascade Mountain province of the Pacific mountain system. The park is influenced by the Pacific Ocean weather and the majority of storm fronts that pass the north Pacific Coast each winter.

Summer weather is generally mild, with clear skies except for occasional thunderstorms that seldom occur with enough force or volume to produce damaging rains or hail. Daytime summer high temperatures usually range from 60 degrees F (15.6 C) to 70 degrees F (21 C) and seldom exceed 85 degrees F (29.4 C).

Approximately 70 percent of the annual precipitation falls from November through March in the form of snow, with less than 6 percent from June through August. During June, July, and August an average of only five days have precipitation greater than 0.10 inch. Traces of snow have fallen during all of the summer months. Annual snowfalls can total over 600 inches, and long-lasting snow depths of 100 to 200 inches occur. This accumulation of snow places tremendous vertical and lateral loads on all structures. Snow loads on structures in Munson Valley have been calculated at up to 500 pounds per square foot. Snow loads are only slightly less in the vicinity of Annie Spring and are slightly greater in the rim area, although the difference in snow depth between these areas can vary considerably. Wind patterns in the Rim Village area cause snow to drift against buildings, causing eccentric loads. The four-story lodge and three-story employee dormitory have, at times, been completely covered with snow.

Crater Lake has been designated a class 1 area under the Clean Air Act, as amended in 1977. This classification allows the least incremental increase for sulfur dioxide and particulate matter above ambient levels. The Clean Air Act also states that visibility and other air quality related values within the park shall be protected.

VEGETATION

The flora of Crater Lake National Park is typical of the vegetation found throughout the southern High Cascades. Generally, the vegetation of the region reflects a mosaic of forested areas and nonforested areas. Climate, topography, soil development, and fire history all affect the composition and distribution of existing plant communities. The major influences that determine vegetation types are elevation within the park, the inability of the soil to hold water, and precipitation.

The sites being considered for development are all mountain hemlock forest communities, but the species composition does differ from one site to another. The vegetation in the Rim Village and Munson Valley is primarily mountain hemlock; the Mazama campground area is primarily lodgepole pine and Shasta red fir. Mountain hemlock generally occurs in open meadows. The sparse understory consists principally of woodrush.

At upper elevations, mountain hemlock tends to grow in isolated stands or clusters. Also associated with mountain hemlock, beginning at approximately 6,200 feet (outside the project areas and occurring in the same meadows), is whitebark pine. The open meadow areas are composed of a variety of grasses, and along stream courses sedges and willows predominate.

The Mazama campground overstory is predominately lodgepole pine, which are shallow rooted and subject to stress from soil compaction and damage from construction and visitor use. Insects and pests, particularly mountain pine beetle, are common in the area and readily attack lodgepole pines. Trees under stress from visitor and development activities are more subject to being killed by mountain pine beetles. Development in this forest type must protect existing trees and manage islands of natural reproduction to replace overstory lost because of the mountain pine beetle. Hazard trees are a problem in the areas proposed for development.

Three plant species under consideration for listing by the United States Fish and Wildlife Service as threatened or endangered are in Crater Lake National Park. They are pumice (Oregon) grapefern (Botrychium pumicola), Mt. Mazama collomia (Collomia mazama), and Crater Lake rockcress (Arabis suffrutescens var horizontalis). The grapefern has been reported along the flanks of Cloudcap and on Llao Rock, and collomia has been recorded in drainages on the west side of the park. However, none of these species occur in the areas under consideration for development. Additional botanical surveys of the affected areas would be conducted before proceeding with design.

WILDLIFE/FISHERIES

The most frequently seen animals in the park are small mammals such as squirrels, chipmunks, pikas, marmots, and hares. Deer, black bear, pine marten, porcupine, and red fox are also seen with some regularity. The most frequently observed birds include Clark's nutcracker, the gray jay, and Steller's jay. The valley garter snake is the only species of snake that occurs naturally in the park and is generally, but uncommonly, found along watercourses and bogs within the park.

The American pergrine falcon (Falco peregrinus anatum) is the only species on the federal endangered wildlife species list (Federal Register, May 20, 1980) that occurs in the park. There are nesting sites within the park, but none have been recorded in the area considered for development in this document (park files). Bald eagles (Haliaeetus leucocephalus) may occasionally be seen flying over the area, but no active nesting sites have been reported.

Self-perpetuating populations of fish are known to occur in 10 streams within the park. Exotic rainbow trout, brown trout, and kokanee occur within Crater Lake as a result of stocking prior to 1939.

WATER RESOURCES

The drainage patterns commonly found on youthful geologic terrains are absent in the park. Even on steep slopes, the runoff channels are broad and poorly defined, with the rounded contours of a mature drainage system. This is because the surface runoff in the park from rain and melting snow is negligible. Water sinks almost immediately into the porous volcanic soils and glacial debris and is released only slowly through evaporation, plant use, seeps, and a few springs, some of which emerge within the caldera and flow directly into the lake. Permanent streambeds in the park generally have steep-sided channels and stream banks are considered wetlands. No floodplains are affected by the alternatives. Some sites under consideration for development might require stream crossings for access roads.

Four drainage creeks are within the area being considered. Munson and Goodbye creeks merge with Annie Creek, which flows into the Klamath River system. Dutton Creek, originating near the Rim Village, flows westward into the Rogue River system.

Crater Lake is immediately north of the project area and is the prime resource of the park. The lake is considered youthful with extremely dilute water. The clarity and light penetration contribute to the deep blue color that is a key to the visitor attraction. Data collected in NPS studies indicate a possible reduction in the lake clarity, and an intensive limnological study was initiated in 1982. Data collected in 1983 indicates that spring water entering the lake from below the Rim Village area contains nutrients (primarily nitrates), which could affect clarity of the water. A panel of scientists who reviewed the elevated nitrate concentrations in the springs concluded that there was no apparent natural cause and, therefore, the elevated concentrations are likely caused by human activities in the area. The most obvious source is the leachfield in the Rim Village, and it was recommended that its use be discontinued. Connection of all facilities in the Rim Village to the Munson Valley wastewater treatment system was approved in 1985, and the system is now being designed.

The domestic water supply for the existing development in the area is from Annie Spring. The water supply currently appears adequate for the demand at existing and proposed facilities.

CULTURAL RESOURCES

Crater Lake National Park, established in 1902, has few cultural resources other than those associated with park development and management. Although the region has a colorful history, the park area was little inhabited by native Americans or settlers, primarily because of the long-lasting snow cover. Hunting, gathering, timber harvesting, and grazing has occurred in the past, but there were no known permanent settlements until the park facilities were developed starting about 1910.

An archeological overview of the park was completed by Oregon State University in 1963. No significant archeological sites were found within the park, but the limited nature of the overview does not preclude that significant sites may be located. Subsequent recent work by NPS archeologists confirm that it is unlikely that significant sites exist here. A survey of park structures and sites was conducted in compliance with Executive Order 11593 to determine if any sites qualify for nomination to the National Register of Historic Places. Crater Lake Lodge has been listed on the National Register of Historic Places (May 1981) because of its (1) regional significance "as an example of the architecture associated with the early 20th century movement for development in the western national parks," (2) "its exterior appearance and ground floor public areas [which] have not been substantially altered since the 1920s," and (3) "its exceptional significance in the development of tourism and outdoor recreation in Oregon." The construction of Crater Lake Lodge was fraught with financial difficulties, and the original design was never completed; some upper floor rooms remain unfinished to this day. The exterior of the original portion of the lodge and the later additions are in the rustic style of early park architecture, featuring massive stone masonry, heavy wood trim, and wood shingles. The lodge exterior is basically simple, lacking the refined details of similar structures of the same style. The interior public spaces also lack the refined details envisioned by the designer, but the massive stone fireplaces, wood slab paneling (with bark remaining), and timber framing provide a warm and inviting atmosphere. Perhaps even more important to many Oregonians are the memories of leisurely dining, the beauty of early morning as the sun illuminates the lake, sunsets viewed from the lodge terrace, and evenings spent in front of the fireplace in the Great Hall. To many, the lodge is a symbol of Oregon's only national park and it is an important part of their heritage.

Building 19, the superintendent's residence, is listed as a national historic landmark. Several other park structures have been recorded on the List of Classified Structures (each is over 50 years old) and are considered to be eligible for National Register of Historic Places listing. These include the 18 structures that form the proposed Munson Valley Historic District. The Sinnott Memorial (no. 67) and the stone comfort station at Rim Village are also considered eligible. All other structures at Rim Village are considered ineligible for listing because of lack of historic significance or integrity.

SOCIOECONOMIC ENVIRONMENT

Crater Lake National Park is a vital element in a diverse regional recreation complex. Many visitors stop at the park as part of a north-south trip to various parks and scenic areas in Washington, Oregon, and northern California. The region offers many summer and winter attractions, including cultural events, boating and rafting, hiking, hunting, and skiing. Regional visitors tend to visit other areas for specific activities but include Crater Lake, if only briefly, in their itinerary. Less than 15 percent of the park visitors remain overnight in the lodge or campgrounds, and less than five percent stay two or more nights. It is unknown what percentage of park visitors obtain lodging or campsites outside the park and return to the park on a day-use basis. Summer use of the park trails is sporadic, with most use occurring along the Pacific Crest Trail. The number of backcountry users in the winter and day-use winter sports enthusiasts is increasing.

Lodging and related services are available close to the park in the summer; many of these facilities have sporadic winter operations. Diamond Lake Resort (44 miles from the Annie Spring entrance station) is a major year-round operation with potential for increased winter use because of the planned development of a nearby downhill ski area. Concept planning also is underway for the development of a large downhill ski area at Pelican Butte, 20 miles to the south of the park. Union Creek Resort (19 miles to the west) and facilities in Fort Klamath (15 miles to the south) have minimal winter use. Snow conditions are marginal in these two areas, and winter guests are generally enroute to Crater Lake or winter use areas in the Umpqua National Forest.

INTRODUCTION

Subsequent to the distribution of the 1984 assessment, additional NPS and independent studies were conducted as to costs for upgrading, stabilizing, rehabilitating, or adaptive use of the existing lodge, possible sites for new lodging, design of a new lodge, and the type of development desired in the Mazama campground area. For the most part, these are continuing refinements of earlier work. However, much work remains to be done, and it is recognized that the alternative selected would be refined during the design phase. The alternatives express concepts for issue solutions and should not be considered final design solutions. Specific requirements for the facilities, site constraints based on wind tunnel testing of snow conditions and site-specific soil analyses, historic architectural factors, construction costs, and other economic or environmental factors will undoubtedly influence the final design of structures, access roads, and parking areas. Options are discussed for some alternatives, which provide designers some latitude to determine the most cost-effective and environmentally sound means to achieve the objectives.

A maximum of 160 lodging units would be provided in the park; approximately 90 of these would be provided in the Rim Village, with the remainder provided at Mazama campground. Wind tunnel testing done in 1986 showed that, even with modifications, it is not feasible to keep the existing lodge open year-round. Alternative lodging would have to be provided if the objective of providing year-round lodging in the Rim Village is to be met.

The following alternatives, based on the philosophy presented in the 1984 assessment, reflect the information gathered from additional studies and decisions in the Interim Development Concept Plan. A preferred alternative has not been selected by the National Park Service. Actions comprising each alternative are compared and summarized in table 1 at the end of the "Alternatives" section; preliminary cost estimates are included in appendix B. Many actions are common to all alternatives.

ACTIONS COMMON TO ALL ALTERNATIVES

ANNIE SPRING/MAZAMA CAMPGROUND

The following actions are based on the approved Interim Development Concept Plan and reflect modifications during preliminary design of road and utility systems for the development. A camper services facility here, south of the campground entrance road, would include a general store, groceries, laundry, shower facilities, and gas station. This facility was originally proposed in a cleared maintenance area south of the road, but further studies on access and parking indicated that a better location would be closer to the existing campground entrance road. The cleared area would be restored as a meadow, which would provide an attractive view for the cabins that would be developed by the concessioner in an area south of the campground and east of the camper services facility (replacing the Rim Village cold-water cabins that have been removed). The concessioner is permitted to construct up to 40 units under the approved interim plan, and additional expansion (up to a total of 80 units) is included under the following alternatives. Initial studies indicate that the most economical configuration would be four-plex units, each with private bath. Some of the cabins would be housekeeping units with kitchens. The cabins and road system are being designed so that some winter use would be possible. Some of the cabins could be two-story units to increase the feasibility of winter use. Future facilities in this development could also include concessioner offices, an employee apartment, and a small storage (warehouse) area.

Existing utilities near the proposed development sites would require minimal extensions and upgrading to serve the new facilities.

MUNSON VALLEY

The existing gas station in Munson Valley would be removed upon completion of the new gas station near the Mazama campground area. The site would be restored to natural condition.

Housing for approximately 30 concessioner employees who would be displaced from the lodge would be provided. Replacement facilities would probably be developed in the Sleepy Hollow housing area; however, the exact location would be determined during a subsequent planning effort that would evaluate other aspects of employee housing in the park. One option would be to convert concessioner office space in the existing Rim Village dormitory to employee quarters and provide new office space and additional housing in Munson Valley.

RIM VILLAGE

The major accomplishment under all alternatives would be the restoration of the rim area to a leisurely pedestrian environment. Traditional

uses/activities in the Rim Village area would be retained. Most development would be pulled back from the rim, reducing congestion adjacent to the rim. The Sinnott Memorial and the exhibit building would remain for use with summer interpretive programs. The exhibit building would also serve as a gathering point for interpretive walks and as a shelter from the weather. The four comfort stations and the community building would be removed. Restrooms would be provided in the new interpretive center (see below) that would be built under all alternatives.

Roads and Parking/Landscaping

All of the parking areas and roads adjacent to the caldera rim in the Rim Village would be removed, and new parking areas and access roads would be developed away from the rim in currently disturbed areas. With elimination of vehicular traffic through the linear parking area, the rim area would become a more natural, although not untrammeled, setting for summer and winter visitors, free of traffic-associated noise and smells.

With removal of these parking areas and roads, the Rim Village area near the caldera would be restored to a pedestrian environment, enhancing the leisurely, pedestrian promenade concept established in the 1920s. Some walkways would be realigned, seating and group gathering spaces would be established, stone walls would be repaired, and native vegetation restored. Careful attention to detail would be essential to ensure that the character of the original design (rustic stone walls and curbs, native plant materials) is retained while permitting movement of the growing numbers of visitors. The current design with linear parking has led to extensive vegetation trampling between parking areas and the rim. Although details might vary with each alternative, it is hoped that with the relocation of parking and redesign of the walkway system the excessive short-cutting and resultant vegetation loss could be substantially reduced, if not eliminated.

A subsurface, trickle irrigation system is recommended to assist in the landscape restoration effort because of the poor soils and limited availability of moisture during the growing season. The system would be used until the vegetation has become established, and then its use would be gradually discontinued to permit the vegetation to adapt to natural conditions.

Parking to replace the spaces removed from the edge of the caldera in the Rim Village would be developed in the area of the former cold-water cabins and, if needed, overflow parking would be provided in the general area of the existing leachfield system adjacent to the main park road. Parking would also be available at the lodging facilities.

Picnic Area

A small picnic area would be retained in the Rim Village; the exact location within the existing picnic area would be determined when plans

for the new facilities and roads are further along. A small parking area would be provided under alternatives I through III. Depending on the final location of the picnic area and its relationship to other facilities, a new comfort station may be needed.

Wastewater Treatment

Any visitor facilities remaining in or developed in the Rim Village area would be connected to the Munson Valley wastewater treatement facility, eliminating the use of the existing septic system.

Concessioner Day Use Facilities

Concessioner-operated food and gift shop services would be continued under all alternatives. Studies to date indicate that it would be more cost-effective to replace the existing building than to attempt to remodel it. Under alternatives II through IV, these facilities would be included in the new lodge structure. Under alternative I, a new structure would be provided unless a reasonable solution is found for remodeling the existing building. (The existing building consists of the original structure with three additions of varying architectural styles. Testing has indicated that the structure is improperly oriented to minimize snow loading problems and that, with the relocation of parking and elimination of plowing on the north side of the structure, numerous structural as well as functional changes would be required.)

Interpretive Center

Although the beauty of the lake and many natural features are best conveyed at the site, the forces shaping this natural wonder and the biotic/geologic associations are probably best interpreted through various media in a structured setting. A year-round interpretive facility in the Rim Village area has been a long-time objective of the National Park Service. The proposed interpretive center would be approximately 150 feet from the rim in the general area of the existing cafeteria. The facility would include a multipurpose auditorium, an information area, a sales area, and restrooms. Exhibit spaces would be designed for the utilization of state-of-the-art media in presenting permanent and seasonally changing exhibits. A detailed program for this facility is being developed; for planning purposes, a facility of 15,000 square feet is envisioned. Personal services, such as guided walks and hikes, talks at points along the rim and at the Sinnott Memorial, and winter snowshoe walks in the Rim Village area, would continue. (See further description below.)

ARCHITECTURAL CONCEPT

All construction would follow design guidelines based on the rustic architectural theme already established in the park. These guidelines

address the basic principles of the rustic style--the use of native materials, complementary color schemes, and scales and siting that harmonize with the natural environment--and significant features of the style's historical application in the park.

The following describes the architects' concept for the design of the new facilities. Although there are differences among the alternatives, the concepts are applicable to all alternatives. Refinement of the design will continue when a preferred alternative has been selected.

Rim Village Design Concept

Vehicles approaching from Munson Valley will arrive at the rim where, to the north, the lake and Wizard Island are in full view. As the road curves to the east around a mature stand of hemlock trees the visitors will pass the interpretive center on the left. The main parking area will be southwest of the interpretive center. The road will continue east past the new lodge/day use facility through the former campground to the picnic area and the existing lodge.

The area between the interpretive center and the new lodge/day use facilities will, by design, draw the visitor from the parking and arrival areas between the two buildings up to the ultimate destination at the rim in a natural and easy way. The transition from parking area to rim will be through an attractive area of walkways and native vegetation rather than through the existing acres of asphalt.

The land will rise gently to the north up to the rim around the interpretive center. The interpretive center will be set into the slope, with its entrance gallery oriented to the south. Both the south and north ends of the interpretive center will have terraces from which to enjoy the view. The orientation of these terraces will be such that winter winds would transport snow past them, leaving the terraces free of snow and allowing viewing access.

The interpretive center will be three stories. The ground level will have a sheltered, south-facing entrance gallery and the information counter, books and map sales, restrooms, an auditorium, and administrative offices. Access to the second level will be by a large open stairway or elevator (for the physically disabled). This level will provide space for exhibits and access to terraces for lake view to the north and down mountain views to the south. The third level, from which winter views of the lake would be possible, will be accessible by two stairways and an elevator; it will sit back from the north and south walls and create two-story spaces for the exhibit level below.

The new lodge/day use facility will be part of the rim arrival experience. Its public rooms will be situated to achieve the separation and privacy necessary for the lodge guests. The north/south alignment of the lodge, determined by careful examination of winter wind patterns and scale models in wind tunnel

simulations, will result in wind-scouring effects on the long sides of the building. Vehicles will arrive under sheltered galleries. This placement of the lodge against the contours of the land will facilitate the functional layering of the building. The service and auto entrance will be at its lowest level. The next level will have vehicle parking, a lodge arrival area, and a gift shop. Above this will be the cafeteria, service and storage areas, and additional parking. The main floor will contain a lounge, dining room, and kitchen, and succeeding levels will contain guest rooms.

Architectural Characteristics

The existing structures at the Munson Valley administration center and the older structures in the Rim Village are built with masonry lower walls, wood siding, and heavy shingle roofs. The new facilities will use these same materials. The setting at the rim is quite different than at Munson Valley, which is below the rim, with large stands of mature trees in a sheltered environment. The Rim Village, on the other hand, is exposed to severe weather and the landscape is more sparse.

The color of the caldera and local rock is a warm buff, with umber and sienna hues, suggesting that the masonry on the building should be of the same colors, blending with the existing rock. In the new facilities the rock should be the same color and texture as the caldera rim. The wood walls should be of large-scaled board and batten siding, stained to a warm rustic hue. The roofs should be large-scaled sawn cedar shakes treated for fire resistance.

The high winds and extreme snowfalls dictate that the buildings should not have excessive projections and appendages and that they should be oriented with the wind to minimize snow deposit areas to the leeward of the buildings.

The interior spaces will have a variety of treatments. The lounge, galleries, and dining room will have generous wood treatment, fieldstone paving, and hardwood and carpet floor covering. The guest rooms will have a restrained rustic character; the floors will be carpeted, and the walls will have wood trim and wainscots set over painted drywall. A number of the rooms could have small fireplaces.

Color treatment and interior design should reflect the rustic themes and crafts of the Pacific Northwest. Images from recent history, exploration, and native American art are vast resources to draw on.

CONSTRUCTION PHASING

Rehabilitation of existing sewer lines and construction of a new sewer line to connect existing and new facilities at the Munson Valley wastewater treatment plant will be initiated as soon as funds are available.

Construction of the camper services facility and the first phase of the cabin development at Mazama would begin as soon as the concessioner has completed plans and obtained funding.

Other construction and rehabilitation projects would be phased to minimize disruption of visitor services. However, there would be periods when only minimal services are available, particularly during the remodeling or replacement of day use facilities in the Rim Village. Under all alternatives, construction would be expected to be phased over a period of five to six years because of the extremely short construction season.

A specific construction schedule cannot be determined until preliminary design has been completed. Under each alternative either the lodge or the day use facilities would be open in the summer to continue providing some services, but it may not be feasible to keep either facility open in the winter, particularly if the final design calls for replacement of the existing cafeteria structure.

EXISTING CONDITIONS Models were used to study concepts for the redesign of the Rim Village—the concepts continue to be refined as design progresses.

ALTERNATIVE I New interpretive center, day use facility, and rehabilitated ±80-room lodge. As the model indicates, the parking area for the lodge is intrusive, and it was determined that it could be reduced by one-third.

ALTERNATIVE II/III New interpretive center, lodge and day use facility, and rehabilitated lodge with annex removed. This photograph illustrates the ±60-room lodge and the parking area required if the existing lodge is used for exhibits and dining.

ALTERNATIVE IV New interpretive center, lodge and day use facility, with the existing lodge removed. This photograph illustrates the 90-room lodge. A long–term objective would be the removal of the dormitory and its access road.

ALTERNATIVE I

Under this alternative the existing lodge would be rehabilitated and the exterior restored. A new interpretive center and day use facilities for year-round use would be developed in the area of the existing cafeteria building in the Rim Village. Although cabins would be available at Mazama, lodging would not be available in the Rim Village during the estimated three years required for rehabilitation of the existing lodge.

LODGING

Crater Lake Lodge would be fully rehabilitated and the exterior restored. The guest rooms would be enlarged where needed to provide complete bathroom facilities (tub or shower) for each room. There would be a mixture of room sizes (and number of beds in a room) throughout the building because of various physical constraints and structural elements. Room finishes, fixtures, and furnishings would be new and of a grade consistent with NPS lodging in other parks. Wall finishes in the guest rooms would include the use of T&G wainscots and wallpaper to retain the rustic character of the lodge. Maximum capacity would be obtained by using previously unfinished spaces on the upper floors, which would provide approximately 82 guest rooms and four employee rooms that would be over the kitchen. The lobby, gift shop, and registration desk spaces would be redesigned for better space utilization. The gift shop would be relocated out of the great hall, the dining room would be restored, and the great hall would be partially restored, although the appearance would change with the insertion of needed structural supports.

The lakeside terrace would be replaced with a slightly wider terrace that could be used for outdoor dining in good weather. The parking area would be redesigned to better complement the structure, and the landscaping would be restored following rehabilitation.

Structural rehabilitation would be accomplished by inserting a supplementary support system into the existing structure of the original lodge and carrying the loads down through the great hall, dining room, and lobby areas on additional columns. Plumbing, wiring, heating, fire detection, and sprinkler systems would be replaced to meet current codes. Material not conforming to code would be replaced throughout the structure. The varied fire stairs and other additions to the exterior would be removed; interior fire stairs would be provided as well as an elevator. The exterior would look much like it did when completed in the 1920s.

INTERPRETATION/DAY USE FACILITIES

An interpretive center and day use facilities would be developed as described under common actions. The facility could be designed as a single structure with separate, defined spaces for interpretation and day

use or it could be two structures as indicated on the map. The facilities would be designed so that portions could be shut down for more efficient winter operation.

Services and programs would be as described under common actions.

ACCESS ROADS/PARKING/UTILITIES

The lodge parking area would be redesigned and the access road to the lodge would be relocated along existing picnic area roads, connecting the lodge to a new day use parking area and the Rim Drive. A new access road to the Rim Village area is being considered--to provide a more attractive approach and to reduce snow removal problems. Most of the roads in the existing picnic area would be removed, but a small parking area would be provided for the walk-in picnic area.

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ALTERNATIVE I / RIM VILLAGE

CRATER LAKE NATIONAL PARK

UNITED STATES DEPARTMENT OF THE INTERIOR/NATIONAL PARK SERVICE

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ALTERNATIVE II

Under this alternative part of the existing lodge would be retained and rehabilitated for adaptive use. A new lodge, interpretive center, and day use facilities for year-round use would be developed in the general area of the existing cafeteria building in the Rim Village.

LODGING

The annex (1922-24 wings) of the existing lodge would be removed, and the original portion of the lodge would be rehabilitated as a day use facility, with a seasonal restaurant and exhibit spaces on the second floor. Overnight accommodations would not be provided in the rehabilitated lodge.

A new 90-room lodge, designed for year-round use, would be constructed in the Rim Village. Public spaces would include a lobby, lounge, and dining room of generous size. Rooms would be comparable to new lodging facilities in other NPS areas and sized to accommodate families and individuals. The decor would follow the rustic architectural theme. (Day use facilities in the new lodge are discussed below.) A limited number of employee quarters for key concessioner staff would be included in the new lodge to ensure that there is adequate staff to provide for around-the-clock guest safety and comfort. In the winter, some guest rooms could be utilized by employees to ensure sufficient staff during periods when the park road might be closed. (Closures of up to three days are not uncommon.) The lodge would include an indoor parking garage at the lower grade level to provide covered winter parking for ±40 overnight vehicles and storage for snow removal equipment and emergency vehicles.

INTERPRETATION/DAY USE FACILITIES

An interpretive center and day use facilities for year-round use would be developed as described under common actions. The day use facilities would be included in the new lodge structure but would be functionally separated from the lodge on the ground floor level. Facilities would include restaurants to serve overnight and day use visitors, a lounge with a view of the lake, a gift shop, and winter ski-touring services. The facilities would be designed so that portions could be shut down for more efficient winter operation, but guest rooms would be available year-round. The new interpretive center would be constructed close to the main parking area.

After removal of the annex, the exterior of the original portion of the existing Crater Lake Lodge, including the exterior fireplace and patio on the west end, would be restored; the interior main floor would be adapted to serve as a fine restaurant, with the second floor used for exhibits and curatorial activities concerning the history of the park. The dining room

would be restored to its original appearance; additional dining space could be provided on the enlarged outdoor terrace in good weather. Handicap access to the second floor exhibits would be provided by an elevator. Under consideration are varied exhibit spaces (possibly in several alcoves), including a restored rustic guest room, a meeting room, an audiovisual alcove, a publications sales area, and office space. The Great Hall could be opened to the second floor, creating an overlooking balcony and exhibit space. The area above the kitchen could be used for four employee quarters.

Structural rehabilitation would be accomplished by inserting a supplementary support system into the existing structure of the original lodge and carrying the loads down through the great hall, dining room, and lobby areas on additional columns. Plumbing, wiring, heating, fire detection, and sprinkler systems would be brought up to code in the occupied portions of the building. Material not conforming to code would be replaced throughout the structure. The third and fourth floors of the structure would not be used.

Other services and programs would be as described under common actions.

ACCESS ROADS/PARKING/UTILITIES

Actions would be the same as described under alternative I except the parking area at the existing lodge would be smaller and redesigned to better complement the historic structure; the landscaping would be restored following the rehabilitation. The patio, with outdoor fireplace, on the west end of the lodge would be connected to the rim walkway system and could serve as a gathering place for interpretive walks or for special programs.

Concept for Rehabilitating Great Hall with Balcony for Exhibits (Alternative II)

R LAKE LODGE

ive II –Dining/Exhibits

ive III–Dining/Lodge–±30 rooms
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ernative III)

ADDITIONAL PARKING
(IF NEEDED)

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ALTERNATIVES II & III / RIM VILLAGE

CRATER LAKE NATIONAL PARK

UNITED STATES DEPARTMENT OF THE INTERIOR/NATIONAL PARK SERVICE

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Restoration of original Crater Lake Lodge (Alternatives II and III)

Concept for new lodge

ALTERNATIVE III

Under this alternative part of the existing lodge would be retained and rehabilitated for continued use as a rustic lodge. A new lodge, interpretive center, and day use facilities for year-round use would be developed in the general area of the existing cafeteria building in the Rim Village. (See "Alternative II and III" map in previous alternative.)

LODGING

The annex (1922-24 wings) of the existing lodge would be removed, and the original portion of the lodge would be rehabilitated as a rustic lodge with approximately 30 guest rooms. All rooms would be in the rustic style of the original lodge; a few would have full baths, some only lavatories with central toilet and bath facilities down the hall. The seasonal dining room, great hall, and exterior would be restored and the lobby area would be redesigned. Rehabilitation would be more extensive than under alternative II because the third floor would be used for guest rooms. Room finishes and furnishings would be as described under alternative I. The attic would not be used for guest or employee rooms because of its limited size and the difficulty of providing fire exits.

INTERPRETATION/DAY USE FACILITIES

All other actions concerning the redesign of the Rim Village, development of a new lodge, interpretive center and day use facilities, and cabins at Mazama would be similar to alternative II except that the new lodge would contain approximately 60 guest rooms rather than 90. Interpretive programs and services would be the same as alternative I.

ACCESS ROADS/PARKING/UTILITIES

Access, parking, utilities, and landscaping would be similar to that described under alternative I.

ALTERNATIVE IV

Under this alternative a new lodge, interpretive center, and day use facilities for year-round use would be developed in the general area of the existing cafeteria building in the Rim Village. The existing lodge, parking area, and its access road would be removed following completion of the new facilities, and the landscape would be restored to natural conditions.

LODGING

A new 90-room lodge, designed for year-round use, would be the same as described under alternative II.

Following completion of the new lodge, the existing lodge would be removed and the grounds would be restored to natural conditions.

A long-term objective would be to remove the employee dormitory in the Rim Village, either moving it to Munson Valley or replacing it when it has outlived its useful life. Because the dormitory is of relatively new construction, it is expected to have a long useful life. The concessioner would have the option of relocating the dormitory to Munson Valley should that prove to be more efficient.

INTERPRETATION/DAY USE FACILITIES

Facilities would be the same as those described under alternative II.

ACCESS ROADS/PARKING/UTILITIES

Actions would be the same as described under alternative I except the old lodge parking area and access road would be removed and the area restored. Access to the employee dormitory would, for the most part, use an existing picnic area road, and all other roads and parking areas would be removed. As in the other alternatives, a picnic area would be provided, but separate parking would not be available. Visitors would walk to the picnic area from the main parking area.

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ALTERNATIVE IV / RIM VILLAGE
CRATER LAKE NATIONAL PARK

UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE

106	40,060
DSC	JULY 87

Concept for new lodge

Approach to the rim through the redesigned Rim Village

Table 1: Summary Comparison of Alternatives

OBJECTIVE: TO PROVIDE A QUALITY YEAR-ROUND LODGING EXPERIENCE

Location/Facility	Alternative I	Alternative II	Alternative III	Alternative IV
Mazama Cabins	Construct ±80 cabins designed to permit winter use; some with cooking facilities.	Construct ±70 cabins designed to permit winter use; some with cooking facilities.	Same as alternative II	Same as alternative II
Rim Village Lodging	Rehabilitate existing lodge providing ±80 rooms of varying size.	Construct new year-round lodge with ±90 rooms.	Construct new year-round lodge with ±60 rooms. Remove annex and rehabilitate existing lodge providing ±30 rustic rooms of varying size, some with baths.	Construct new year-round lodge with ±90 rooms.
	Under all alternatives, lodging in the park would be limited to 160 units with a maximum of 90 units in the Rim Village. The remainder of the lodging units would be adjacent to the Mazama campground.			
Food Service	Restore dining room in existing lodge. Widen terrace to permit outdoor dining.	Same as alternative I	Same as alternative I	Dining room in new lodge.
	Under all alternatives varied year-round food service would be provided in day use facility. Limited food service would be available at Mazama camper services facility.			
Concession Employee Housing and Administrative Facilities	Under all alternatives key employees would be housed in the lodge (or lodges) to ensure visitor safety and comfort. During winter operation, additional employees might occupy guest rooms to ensure sufficient employees to operate the lodge during periods when the road might be closed. Approximately 30 employees displaced from the rehabilitated lodge would be housed in new facilities in Munson Valley. Concessioner administrative facilities might be relocated from the existing dormitory in the Rim Village to the new facility in Munson Valley. Removal of the existing dormitory is a long-term objective under alternative IV.			

OBJECTIVE: TO PROVIDE A QUALITY YEAR-ROUND INTERPRETIVE PROGRAM

Location/Facility	Alternative I	Alternative II	Alternative III	Alternative IV
Interpretive Center	Under all alternatives a new year-round interpretive center would be provided in the Rim Village. A safe way to view the lake in the winter would be incorporated into the design.			
	Under alternative II, the rehabilitated existing lodge (with the annex removed) would be adapted to provide exhibits related to the history of the park.			
Day Use Facilities	Under all alternatives new day use facilities would be developed in the Rim Village. Under alternatives II through IV, the facilities would be incorporated into the new lodge.			
Sinnott Memorial and Exhibit Building	The Sinnott Memorial and exhibit building would be retained for summer use under all alternatives.			
Community Building	Remove under all alternatives.			

OBJECTIVE: TO REDUCE VISUAL INTRUSION, CONGESTION, AND POLLUTION IN RIM VILLAGE

Location/Facility	Alternative I	Alternative II	Alternative III	Alternative IV
Roads and Parking Adjacent to Rim	Remove roads and parking adjacent to rim and excess roads in picnic area. Develop new parking area away from rim adjacent to interpretive center/day use facilities.			
	Redesign existing lodge parking and relocate access road (utilizing picnic area roads). Provide parking for picnic area.	Redesign existing lodge parking and reduce in size.	Same as alternative I	Remove most of existing lodge parking area and most picnic area roads except those needed for access to dormitory. Provide parking for the picnic area.
	Under all alternatives an overflow parking area would be provided near the main road if the new parking area proved inadequate to handle normal visitor loads.			
Crater Lake Lodge	Rehabilitate entire structure for lodging; restore exterior and some interior spaces.	Remove annex; restore exterior and dining room; adapt for history exhibits.	Remove annex; restore exterior and dining room; rehabilitate with ±30 rustic rooms.	Remove structure and restore area to natural conditions.
Picnic Area	Redevelop as smaller, walk-in picnic area under all alternatives.			
Comfort Stations	Remove all four existing comfort stations under all alternatives. A new comfort station might be provided for the picnic area if the main restroom facilities are too far away.			
Utility Systems	Under all alternatives, all facilities would be connected to the Munson Valley wastewater treatment system (gravity flow).			

OBJECTIVE: TO REDUCE ENVIRONMENTAL IMPACT IN THE RIM VILLAGE AREA THAT COULD AFFECT THE CRATER LAKE ECOSYSTEM

The proposed actions are essentially the same under all alternatives.

Reduce vehicle emissions and contaminants through the reduction or elimination of roads and parking areas adjacent to the rim and the reduction of vehicle movement through the use of a central parking area away from the rim.

Eliminate drainage into the caldera from roads and parking areas in the Rim Village.

Eliminate blowing snow over the edge of the rim during plowing operations; snow may contain contaminants from roads and parking areas.

Connect all facilities to a sewer system with treatment in Munson Valley, eliminating the existing septic system serving some of the Rim Village facilities.

Where development is removed from the Rim Village area, implement a program of intensive revegetation using native plant species; design walkways to handle anticipated visitation levels and discourage shortcutting.

INTRODUCTION

The four alternatives under consideration would differ little in their effect on the human environment. Alternative IV would restore more presently disturbed land to near natural conditions than the other alternatives and similarly would reduce traffic movement in the Rim Village. Alternatives I through III would use similar amounts of land for structures, roads, and parking, with only minor differences in the size of structures and parking areas. Quantities used in this assessment are based on programmatic requirements and will be further refined during preliminary design. Design criteria will call, where appropriate, for minimal impact construction techniques (such as pumping concrete rather than driving a mixer into a site).

Under all alternatives, construction activities would be carefully monitored to minimize the potential for debris and other contaminants to enter the lake. Any construction activities would temporarily decrease local air quality because of increased dust, particulate matter, and equipment emissions. Frequent sprinkling of the construction site should minimize this potential. The disturbed areas on and adjacent to all construction areas would be landscaped and revegetated with native plant materials. Particular care will be taken to minimize erosion of disturbed areas during spring runoff.

EFFECTS ON NATURAL ENVIRONMENT

To the maximum extent possible, new development will occur on existing or previously disturbed land. The change in land devoted to structures, roads, and parking would vary slightly with each alternative and the options selected. The change has been calculated by subtracting areas where facilities would be removed and the land restored to a more natural condition from any undeveloped areas where facilities would be added. Figures are approximate and should only be used for comparisons.

None of the proposed alternatives would affect endangered or threatened species in the area. Also, no wetlands or floodplains would be adversely affected by any proposal. All alternatives would ensure protection of the Annie Spring water source, which is the source of water for the existing development in the area.

EFFECTS COMMON TO ALL ALTERNATIVES

Annie Spring/Mazama Campground

Providing a camper services facility, cabins, access roads, and parking areas would affect 10 to 12 acres in the mature lodgepole pine forest for the development. Only a portion (approximately 1 to 1.5 acres) of this area would be covered by impervious surfaces and removed from biological productivity. (Future expansion of the cabin facilities would affect an additional 15 to 25 acres, with approximately 2 to 3 acres removed from biological productivity.) Portions of the development would occur on existing road surfaces. A 2-acre site that is currently used as a construction site and storage area would be restored as a meadow.

A relatively small portion of the area would be directly affected by construction. Construction activities would result in the surface disturbance of the soils and soil compaction on the site. Visitor use would result in localized impacts on vegetation and soils, increased tree mortality in the already diseased forest, and required removal of hazard trees. There would be a net reduction in tree stand density and limited successful plant reproduction. Revegetation would help mitigate these impacts.

Wildlife in this area would be displaced. Air quality would decrease slightly, but temporarily, because of soil surface disturbances and construction equipment emissions. Increased noise and visitor inconvenience would also occur during the period of construction, most of which would be during the peak visitor season. A local increase in surface runoff would result from covered surfaces, but because of the porosity of the soils, very limited soil erosion problems are expected.

Utility lines would generally be installed beneath or adjacent to roads and walkways. The existing sewer main location has been a factor in refining the preliminary design to minimize utility extensions.

The additional development would increase vehicle movement in the area, adding to localized air pollution. Much of the traffic increase would occur at arrival and departure times at the cabins and campground, but traffic to the store, laundry, and gas station would probably be fairly steady throughout the day. Although local traffic would increase, on a parkwide basis there should be a reduction in vehicle traffic because campground/cabin users would no longer have to drive to the Rim Village for groceries or to Munson Valley for gas. This might also help relieve some of the congestion in the Rim Village. Relocation of the gas station would not generate additional traffic by visitors but would increase the distance traveled by employees to obtain fuel (although it is doubtful that there would be many trips just to purchase gas).

Munson Valley

Relocating the gas station to the camper service facility would remove the visual intrusion of the contemporary gas station from the rustic headquarters complex. The area would be restored as close as possible to natural conditions, returning this small area to biotic productivity.

Approximately 30 concessioner employees could be displaced from the lodge. Their quarters and (possibly) management offices would be developed in Munson Valley, requiring approximately 0.5 acre for the structure, driveway, and parking. This site would be removed from biological productivity unless an existing site was used. Several possible sites in currently developed areas would be considered, all with easy access to utilities, but a final site has not been selected.

Rim Village

The existing Rim Village developed area occupies approximately 32 acres. However, developed areas near the caldera rim are most heavily utilizied, and the more remote sections of the picnic area receive relatively little use. Under all alternatives, the total affected area would be significantly reduced, primarily because of the reduction in linear parking and roads that currently spread visitor use over a large area. Alternatives I through III would affect approximately 11 acres; alternative IV, with the removal of the existing lodge, would affect approximately 8 acres. The area devoted to structures, roads, walkways, and other impervious surfaces would vary slightly with each alternative. Although some visitor use could be expected to continue over much of the 32-acre site, a large portion of the area would be restored to more natural conditions.

Retaining the Sinnott Memorial and exhibit building would have no additional environmental impact. Removing the community building would eliminate the only facility currently available for indoor interpretive programs, but facilities for these programs would be provided elsewhere.

Removal of the four existing comfort stations and approximately 4,000 linear feet of roads in the picnic area (a former campground) would

permit up to 10 acres of forested area to return to natural biotic productivity. If necessary, one comfort station in the picnic area could be replaced with no additional impacts.

Some walk-in picnic facilities, with paths, tables, and grills, would be retained. A small parking area for this picnic area would be provided under alternatives I through III; a separate parking area would not be provided under alternative IV.

Construction of a new interpretive center and day use facilities would occur in an existing extensively altered area. Impacts from construction activities would be short term, with no additional long-term impacts on the natural environment. Air quality would decrease slightly, but temporarily, because of soil surface disturbances and construction equipment emissions. Increased noise and visitor inconvenience would also occur during the period of construction, most of which would be during the peak visitor season.

Removal of the two cabins from behind the cafeteria would permit relocation of most or all of the parking to this area away from the rim. New parking areas and roads would be developed in presently disturbed areas. The removal of 450 parking spaces and up to 2,100 linear feet of two-lane roads from the rim area would allow the restoration of approximately 6.0 acres of disturbed open mountain hemlock forest. A significant quantity of asphalt would be removed, providing additional protection of the lake from vehicle-related pollutants (e.g., petroleum products and emissions particulates). Constructing central parking areas would localize congestion and vehicle emissions, which are now distributed over a wide area along the rim. Vehicle emissions should be somewhat reduced because of better organized parking and shorter travel distances.

Water runoff away from the caldera would increase, but this would only slightly increase local erosion because of the soil characteristics, which permit rapid absorption of water. Snowplows would no longer blow snow over the caldera edge, thus eliminating the potential for contaminants to enter the lake because of the plowing and eliminating the "snow berm" that makes winter access to view the lake both difficult and hazardous. The areas where asphalt is removed would be scarified, recontoured, and revegetated with native plant materials. (Species listed are available through the park resource staff.)

It should be noted that the initial parking areas proposed might have a lower capacity than the existing parking areas along the rim. It is hoped that the central parking areas, more efficiently designed, would accommodate the average parking requirements on a busy summer day. If these parking areas could not accommodate average midday visitation, which would be evident if numerous vehicles were circulating in search of parking, an overflow parking area would be constructed below the main parking area adjacent to the main park road. Construction of an additional overflow parking area adjacent to the main road would occur in an area that has been disturbed by previous road and septic system/leachfield construction. Fill could be required to bring the site to

the same grade as the road. No trees (other than some seedlings along the road shoulder) would be removed. The existing septic/leachfield system would be abandoned and structures near the surface removed, allowing this area to return to natural biological productivity.

With removal of extensive parking and elimination of constant vehicle movement, the Rim Village area would be returned to an attractive pedestrian environment, re-creating the leisurely pedestrian promenade of the late 1920s and 1930s. There would be removal of old walkways and construction of new walkways, restoration of stone walls, establishment of seating and group gathering areas, and restoration of native vegetation.

All remaining or proposed facilities in the Rim Village would be connected to the existing wastewater treatment system in Munson Valley. Preliminary studies indicate that the line would mostly follow the park road, requiring approximately 17,000 feet of pipe to connect the Rim Village facilities to the lagoons in Munson Valley. The lagoon treatment method has proven the most successful method, considering soil and weather conditions at Crater Lake. An additional lagoon might be required in Munson Valley; it would be constructed in an area previously planned for lagoon expansion. The existing septic/leachfield system in the Rim Village would be abandoned. Although it is not known if this system has had any effect on water quality in the lake, it is desirable to avoid the risk and discontinue its use.

ALTERNATIVE I

The rehabilitation of Crater Lake Lodge would have minor impacts on the human environment. Construction activities would temporarily decrease air quality because of dust and construction equipment emissions; vegetation in the vicinity of the structure would likely be trampled and soil would be compacted. Approximately 2.6 acres in the Rim Village would continue to be occupied by the lodge and its associated roads and parking areas. Following construction, road shoulders and grounds around the facility would be landscaped and revegetated with native plant materials. Construction activities would be carefully monitored to minimize the potential for debris and other contaminants to enter the lake.

The construction of a new interpretive center and day use facilities in the Rim Village would have minimal environmental effects but would result in short-term visitor inconvenience. The new facilities would be constructed in an existing disturbed area away from the rim in the general area of the existing cafeteria. The new facilities would cover approximately 1.5 acres of land currently covered with asphalt, fill material, and structures. Construction of the access road and parking area south of the proposed interpretive center and day use facilities would affect an additional 2 to 3 acres of the mountain hemlock habitat. Most of this area has been previously impacted with the cabin development, fill for parking areas, and access roads to the existing picnic area. Some immature trees in existing disturbed areas would be removed to develop the new facilities; present studies do not indicate the need to remove any mature

trees for the development of these facilities. Some mature mountain hemlocks would be removed to improve the access road to the existing lodge (the exact number cannot be established until a final alignment has been selected). The proposed access road would, for the most part, use existing picnic area roads.

Most of the remaining roads and buildings in the rim area would be removed. Approximately 6 acres adjacent to the rim would be scarified and regraded, landscaped, and revegetated with native plant materials.

ALTERNATIVES II AND III

These alternatives are similar except for the difference in the proposed adaptive use of the rehabilitated Crater Lake Lodge and the number of rooms in the new lodge (90 in alternative II and 60 in alternative III).

The demolition of the annex and the rehabilitation of the original portion of Crater Lake Lodge would have minor impacts on the human environment. Construction activities would temporarily decrease air quality because of dust and construction equipment emissions; vegetation in the vicinity of the structure would likely be trampled and soil would be compacted. With the retention of the existing lodge for adaptive use, approximately 2.0 acres in the Rim Village would continue to be occupied by roads, parking areas, and structures associated with the lodge. The required acreage for parking would depend on the adaptive use option selected; lodging (alternative III) would require more parking than an exhibit facility (alternative II). Impacts from construction activities during renovation of the existing lodge would be essentially the same as those described under alternative I. The area now occupied by the annex, which would be removed, would be landscaped and returned to biological productivity. Following construction, road shoulders and grounds around the facility would be landscaped and revegetated with native plant materials.

The construction of an interpretive center, new lodge, and day use facilities would have the same effect as alternative I. The new lodge and day use facilities would be combined in a single structure in the same location as alternative I. Although there would be more lodge rooms under alternative II than III, these rooms would be obtained by a change in the roof pitch and layout of the upper floors and would not require a larger ground area.

Removal of most of the roads and remaining buildings in the rim area would have the same effects as alternative I.

ALTERNATIVE IV

The construction of an interpretive center and a new lodge and day use facilities in the Rim Village would have essentially the same effects as alternative II. The area covered by structures and paving in this

alternative would be approximately 8.8 acres, which would not be available for biological productivity or wildlife habitat.

Most of the roads and remaining buildings in the rim area and the picnic area would be removed, with only an access road to the employee dormitory remaining. Approximately 5.5 acres would be scarified and regraded, landscaped, and revegetated with native plant materials. In addition, removal of the existing lodge and adjoining parking areas and access roads would permit approximately 2.6 acres to be returned to natural conditions.

EFFECTS ON CULTURAL RESOURCES

EFFECTS COMMON TO ALL ALTERNATIVES

None of the alternatives would have an impact upon known archeological resources. A site-specific archeological survey would be conducted and a clearance obtained prior to any ground-disturbing construction activities.

Removal of the comfort station adjacent to the cafeteria building would create an adverse impact upon that structure, which is an example of early rustic park architecture and is on the List of Classified Structures; it is also considered to be eligible for listing on the National Register of Historic Places. In accordance with the requirements of the National Historic Preservation Act, as amended, the National Park Service would conduct full consultations with the Oregon State Historic Preservation Office and the Advisory Council on Historic Preservation regarding the removal of the comfort station.

All alternatives would have a degree of impact upon the Crater Lake Lodge, which is listed on the National Register of Historic Places. Consultations with the Oregon state historic preservation officer, the Advisory Council on Historic Preservation, and the Oregon historic preservation community have been underway since 1983 in an effort to reach an acceptable solution. Those consultations and compliance with relevant regulations would be required under the alternative that is selected to help determine the appropriate resolution of Crater Lake Lodge and to identify the appropriate measures required to mitigate any adverse impacts on the structure. The intention of the rehabilitation efforts would include maximum retention of cultural values, particularly with the exterior restoration. Treatments under any of the alternatives would be designed by qualified historical architects and would be based on requirements of the secretary of the interior's "Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings," NPS policy, and NPS-28 requirements.

ALTERNATIVE I

This alternative, which proposes the complete rehabilitation of the existing lodge, would affect the structure's significant characteristics. However, under the revised regulations of the Advisory Council on Historic Preservation, "Protection of Historic Properties" (36 CFR part 800), this effect would not be adverse because it would maintain and protect the characteristics that made it eligible for listing on the National Register--1) its significant architectural qualities would be preserved, 2) its exterior appearance and ground floor public spaces would remain essentially unchanged, and 3) its role in tourism and outdoor recreation in Oregon would continue.

ALTERNATIVE II

Removal of the 1922 lodge annex and rehabilitation of the original portion of the lodge as a day use facility (seasonal dining and exhibits) would affect the structure's significant characteristics. Under the provisions of the revised regulations of the Advisory Council on Historic Preservation, "Protection of Historic Properties" (36 CFR part 800), this alternative would cause an adverse effect because 1) its exterior appearance would be significantly altered with removal of the annex, 2) its exterior appearance and ground floor public spaces would be significantly altered, and, 3) its traditional role as a lodge that contributed to the development of tourism and outdoor recreation in Oregon would not be continued.

The removal of the annex would result in the permanent loss of over one-half of the structure, significantly altering the appearance. The portion of the lodge with the most architectural merit would be preserved. No significant interior public spaces would be lost with the removal of the annex. Interior public spaces would be altered to provide structural reinforcement and to provide for adaptive use, resulting in the possible loss of original fabric and significant architectural characteristics. Although exterior rehabilitation of the original portion of the lodge would conform with the secretary of the interior's standards, the adaptive use of the interior original portion of the lodge as a day use facility would create an adverse effect because it would diminish the integrity of the lodge through the destruction of the annex and through the elimination of its role in providing overnight lodging. Mitigating measures might include the production of measured drawings and photographs to record the existing conditions of the lodge in accordance with the standards of the Historic American Buildings Survey and interpretation of the structure and its history.

ALTERNATIVE III

Removal of the 1922 lodge annex and rehabilitation of the original portion of the lodge for continued use as a seasonal facility for lodging and dining would have affects that are similar to alternative II. However, this alternative would not affect the structure's historic role of providing overnight lodging or its continuing role in the development of tourism and outdoor recreation in Oregon.

Mitigating measures might be as described under alternative II.

ALTERNATIVE IV

This alternative, which considers the complete removal of the entire lodge complex, would create an obvious adverse effect upon the structure.

Implementation of this alternative would require extensive consultations between the National Park Service, the Oregon State Historic Preservation Office and the Advisory Council on Historic Preservation, in accordance with the Advisory Council's regulations.

Mitigating actions might be as described in alternative II.

EFFECTS ON SOCIOECONOMIC ENVIRONMENT

EFFECTS COMMON TO ALL ALTERNATIVES

Construction activities at Mazama campground would disturb visitors using the existing campground for a period of several years. Construction would coincide with the visitor use season because of the heavy snows that preclude most winter construction activities. Construction hours would be restricted so as not to disturb campers in the early morning and evenings. Most campers are away from their campsites during the day and there would be minimal disturbance.

Upon completion, the new facilities would improve the quality of the visitor experience and provide a more convenient location for groceries and supplies. Campers would no longer have to drive to the Rim Village for supplies, reducing travel and somewhat relieving congestion in the rim area. Laundry and shower facilities, frequently requested by campers and hikers, would be available. The new gas station location would be convenient for campers but less convenient for park residents and day visitors. The Mazama cabins would be a lower-cost alternative to the lodge, giving individuals, groups, and families additional opportunities to spend a night in the park.

Relocating the concessioner offices and some or all employee quarters to Munson Valley would increase travel distances for concessioner employees working in facilities at the rim and decrease travel distances to the facilities at Mazama.

Installation of a sewer line between Rim Village and Munson Valley could cause considerable disruption of traffic during one to two summers if the line was located in the main road, as currently proposed. Provisions would be included in the construction contract to minimize the disruption of traffic flow, but disruptions could not all be avoided.

ALTERNATIVE I

Traditional services and facilities would be maintained in the Rim Village under this alternative. The long-standing tradition of lodging directly on the rim of the caldera would continue, and the ambience of the old lodge in its historic setting would be retained. The aesthetic quality of the rim area would be significantly improved. Parking and roads along the rim would be removed, eliminating the noise, congestion, and pollution associated with constant vehicle movement. Most parking areas would be south of the existing parking area below the level of the rim where vehicles would not be seen. Vehicle movement between the lodge and the main parking area would continue to be an intrusion, although less so than under existing conditions because most of the lodge access road would be a considerable distance from the rim. The new interpretive center and day use facilities would sit well back from the rim and would not be visible from the lake. The structures, as now designed, are

perpendicular to the rim, reducing their visibility from viewpoints around the rim. The existing lodge would continue to be visible from the lake and from viewpoints around the rim.

Winter experiences in the Rim Village would change significantly. Snow would no longer be piled along the rim as a result of plowing operations. Visitors wishing to view the lake from the rim would find access across the snow more difficult than from the existing plowed parking area. Snow fencing to make over-snow walkways would be tried, but it might not be effective under windy or warmer weather conditions. The lack of snow berms and asphalt parking areas would improve the visual experience, and the opportunity to explore the rim on snowshoes or skis could add to the quality of the experience. Elimination of the unattractive culvert from which most winter visitors must view the lake would be a major improvement.

Interpretive services would improve significantly over current conditions. The new interpretive center in the Rim Village would place these services in a location that would serve most visitors and where a variety of interpretive programs have traditionally been available. With the new center, some of these programs would become available year-round. Winter visitors would be able to view the lake from the comfort of the upper floor of the interpretive center or walk across the snow to see the lake from the edge of the caldera.

The actions under this alternative would inconvenience the visitors for a number of years while the facilities were being constructed or remodeled. Lodging would not be available in the Rim Village for two to three seasons; limited lodging would be available at the Mazama cabins (assuming they had been constructed), and food would be available in the cafeteria building during the lodge renovation. Accommodations for visitors would be significantly improved and health and safety problems would be corrected with completion of the lodge. Lodge guests would find comfortable rooms with full bathroom facilities. Substandard rooms would be eliminated and the price range would be more varied.

Replacement of the day use facilities and construction of the interpretive center could require two to three years. During this period there would be minimal facilities for day visitors in the summer (in the rehabilitated lodge) and no facilities at the rim in the winter unless phased construction would permit minimal facilities to remain open. In addition to the inconvenience for visitors, there could be a considerable loss of income for the concessioner.

Relocating parking and restoring the rim area could also extend over two to three summers. Although phasing would permit some services to continue, there would be considerable congestion in the Rim Village for a period of five to six years during the various construction projects.

ALTERNATIVE II

Traditional services and facilities would be maintained in the Rim Village under this alternative. The new development would be away from the rim where the facilities would not intrude on the lake scene. Continuing lodging near the rim would appeal to traditional visitors, and providing year-round lodging would significantly expand visitor opportunities to enjoy the park. Some visitors would miss the ambience of staying overnight in the existing lodge directly on the rim of the caldera, ending a long-standing tradition in the park. Combining lodging and day use facilities in a single building might lead to some conflicts between various groups, but these should be minimal with clear separation of the functional areas. Lodge guests would still experience tranquil mornings and evenings without the midday crowds. Programs in the new interpretive center would be convenient for lodge guests.

Other effects of this alternative would be similar to alternative I with the following exceptions. Construction of a new lodge in the Rim Village in the first phase would mean no loss of lodging capacity during the five to six years of construction activities. Phased construction might allow winter activities to continue. However, winter use could be curtailed for two to three years if phased construction was not feasible. Completion of the new lodge would increase lodging capacity to 90 rooms, and winter lodging would be available in the Rim Village. In addition to the inconvenience for visitors, there could be a loss of income for the concessioner, primarily because of reduced day visitor services and winter operations for a two- to three-year period. This loss could be somewhat offset by the later increased lodging capacity and winter operation of the new lodge.

Winter lodge guests might be stranded when storms force closure of the access roads. Lodge management would have to be prepared to serve these visitors for periods of two to three days. Visitors would be adequately warned of this possibility, as they are in other similar winter use areas. Those with reservations who could not reach the lodge would be the most inconvenienced. To reduce the duration of road closures over current levels would require additional NPS personnel, equipment, and housing.

When the actions proposed under this alternative were completed, visitors would find the traditional facilities and services available in the Rim Village. The original lodge would remain, adapted for new uses, and health and safety problems would have been corrected. The new lodge would provide improved accommodations and be available for year-round use. Interpretive services and day use facilities would be significantly improved.

ALTERNATIVE III

The effects of this alternative would be similar to alternative II with the following exceptions. The long-standing tradition of lodging directly on

the rim of the caldera would continue, although at a reduced capacity. The ambience of the old lodge and its historic setting would be retained. Construction of a new lodge in the Rim Village in the first phase would mean no loss of lodging capacity during the first two to three years of construction activities. Lodging capacity would be reduced from ±80 rooms to 60 rooms while the existing lodge is renovated, but winter lodging would be available in the Rim Village. Phased construction might allow winter activities to continue. However, winter use could be curtailed for two to three years if phased construction was not feasible. Following rehabilitation of the existing lodge and completion of the new lodge, capacity would be increased to ±90 rooms. In addition to the inconvenience for visitors, there could be a considerable loss of income for the concessioner primarily because of reduced lodging capacity and reduced day visitor services and winter operations for a two- to three-year period. Winter operation of the new lodge might somewhat offset this loss.

When actions proposed under this alternative were completed, visitors would find the traditional facilities and services available in the Rim Village. The original lodge would remain, retaining the small rooms and central toilet and bathing facilities, although at reduced capacity, and health and safety problems would have been corrected. The new lodge would provide improved accommodations and be available for year-round use. Along with the Mazama cabins, this alternative would provide a broad spectrum of lodging wthin the park. Interpretive services and day use facilities would be significantly improved.

ALTERNATIVE IV

The effects of this alternative would be similar to alternative II with the following exceptions. Disruption of traditional visitor services and activities could occur over three to four years, a shorter time span than in the other alternatives because the first phase would provide all new facilities. Demolition of the existing lodge and restoration of the landscape around the lodge and in the picnic area would be minimally disruptive. Construction of a new lodge in the Rim Village in the first phase would mean no loss of lodging capacity during the two to three years of construction activities. Phased construction might allow winter activities to continue. However, winter use could be curtailed for two to three years if phased construction was not feasible. With completion of the new lodge, capacity would be increased to 90 rooms and winter lodging would be available in the Rim Village. However, there would be no lodging directly on the rim of the caldera, ending a long-standing tradition in the park. In addition to the inconvenience for visitors, there could be a loss of income for the concessioner, primarily because of reduced day-visitor services for a two- to three-year period. This loss could be somewhat offset by the later increased lodging capacity and winter operation of the new lodge.

When actions proposed under this alternative were completed, visitors would find the traditional facilities and services available in the Rim

Village. However, the existing lodge would be removed, replaced by new facilities that would be in the rustic style of park architecture. The new lodge would provide improved accommodations and be available for year-round use. Interpretive services and day use facilities would be significantly improved.

EFFECTS ON REGIONAL ECONOMY

The advent of winter lodging inside the park could have two very differing effects on private operators near the park. It could be harmful to private operators by taking away their customers, or it could stimulate demand for the private operators as Crater Lake becomes known as a winter destination. Of particular importance are the NPS commitment to maintain access to the rim area in the winter and the cost of winter lodging in the park. If these costs are high, it could stimulate demand for lower-priced accommodations adjacent to the park. The general conclusion is that private operators adjacent to the park (with the exception of Diamond Lake Resort) would do little to provide winter accommodations as long as the park was operated on a day use basis. However, they would expect to benefit from the promotional activities of the concessioner and the general awareness if the park became an overnight destination in the winter. This effect is evident in the summer, with local businesses primarily receiving the overflow when the park facilities are filled to capacity or when visitors find in-park lodging costs too high.

Analysis indicates that year-round lodging in the park would be profitable for a concessioner with the National Park Service maintaining access to the rim. However, several years of intensive promotion would be required. The regional economy would be affected through increased year-round employment, sales, and taxes.

To determine the regional economic impact of the closure of Crater Lake Lodge for rehabilitation or replacement, interviews were conducted with the Chamber of Commerce and, where possible, the tourism and convention bureaus at Bend, Klamath Falls, Ashland, Medford, Grants Pass, and Roseburg. Also interviewed were officials from the state of Oregon, concessioner personnel at Portland and Crater Lake, and selected businesses in the Crater Lake area.

Crater Lake, with 403,000 visitors in 1986, ranked sixth in the top 10 attractions of Oregon. For comparison, Multnomah Falls of the Columbia River Gorge ranked first with 2,417,000 visits and Timberline Lodge/Mount Hood ranked second with 1,224,000 visits. The Oregon Shakespearean Festival at Ashland ranked eighth.

In 1985, United States travelers spent $2.52 billion in Oregon, and another $80 million was spent by visitors from foreign countries. Travelers in Oregon generated approximately $86.1 million in taxes. Travel and tourism ranks as the third largest industry in the state.

During the 112-day 1986 season at Crater Lake, 6,553 rooms were sold in the lodge. These rooms were occupied by 15,433 visitors with an average stay of one night and an average room rate of $50. Guests at the lodge spent $546,338 for food, alcoholic beverages, rooms, gifts, and miscellaneous items.

Room tax collected was near $20,000. The payroll for 47 lodge employees was $119,500. The amount expended by the concessioner locally for food, alcoholic beverages, restaurant supplies, and lodge and guest supplies totaled $91,000.

The expenditures and tax receipts represent less than one-half of one percent of the total travel-related income of the five counties that include/surround Crater Lake National Park. The general conclusion of those interviewed was that the closure of the lodge for three to four years would have no adverse impact. However, there is concern that tourists and tour groups would bypass the area if lodging were not available in the park. Some motels might experience an increase in rooms sold. There was concern that if food were not available in the park, it would be tantamount to closing the park. Any loss of tourism revenues could be offset by employee wages and purchase of construction materials.

The National Park Service's attempt to extend the lodging season and increase the number of permitted lodging units is based on a market analysis indicating that the deteriorated condition of the existing facilities is a major deterrent to attracting overnight guests. With completion of the new or rehabilitated facilities overnight visitation to the park is expected to increase. Many travel agents and tour operators do not now recommend staying in the lodge but, as the tourism industry becomes aware of the improvements, demand for lodging will increase. It could be assumed that a number of visitors, primarily from the Crater Lake region, who return to the lodge for sentimental reasons would no longer come for an overnight visit because the ambiance would be gone. Others, who found the deteriorated facilities unpleasant, may visit the park more frequently with new or rehabilitated facilities.

EFFECTS ON PARK MANAGEMENT

Alternative I would have little effect on park management. Traditional costs to provide access to the rim in the winter and to clear snow to permit the lodge to open for the summer would continue. Annual park and concessioner maintenance costs for the existing lodge should be significantly reduced following the structural rehabilitation. Operation of a year-round interpretive center in the Rim Village would increase costs for personnel, utilities, and maintenance. Additional costs would occur for snow removal for access to the Mazama cabins and camper services facility; these costs would increase if these facilities were operated in the winter.

Under alternatives II through IV park operations would change significantly with an expanded lodging season. Additional personnel and equipment would be required to provide round-the-clock security and emergency services. Snow removal costs could increase significantly with winter lodging provided in the Rim Village because the National Park Service would feel obligated to provide access as rapidly as possible during severe storms.

The following cost estimates include anticipated operational and maintenance costs associated with the alternatives. The estimates are probably low, particularly regarding snow removal costs, because it is difficult to predict overtime work if weather conditions are particularly severe. The cost estimates include routine annual maintenance costs but do not include major items such as reroofing, exterior painting, and similar cyclical costs that must be amortized over various time spans and also must be based on the actual facility design. The costs are separated into two categories: annual and one-time costs.

Removing the Rim Village comfort station, community building, and picnic area comfort stations would save annual operation and maintenance costs of approximately $25,000. Maintaining access to the facilities at Mazama would cost approximately $5,000 annually but could increase depending on the level of winter use of the cabins and the responsibilities of the concessioner for snow removal. Maintaining access to the new concessioner dormitory/offices would be minimal ($2,000) if located close to existing roads that are plowed.

Maintaining 24-hour access (except in the most severe storms) to the Rim Village lodge and ensuring visitor safety would require a significant investment in equipment and personnel. Annual costs to maintain 24-hour access are estimated at $230,000 over the current cost. However, these costs would be reduced substantially if the public accepted the possibility of being isolated until the roads could be reopened. It is assumed that the latter would be acceptable and would cost approximately $40,000 annually for additional personnel and vehicles. Additional snow removal equipment and emergency vehicles would still be required. The one-time cost to acquire additional snow removal equipment, a fire truck, an ambulance, and other emergency equipment is estimated at approximately

$400,000. An additional storage building might be required if space cannot be made available in existing structures, adding an additional $250,000.

Operating the new interpretive center in the Rim Village could cost approximately $40,000 annually, although the actual costs are speculative until preliminary design has been completed. Under alternative IV, the annual cost to open the road to the existing lodge would be eliminated, but the cost to open the road to the employee dormitory would increase.

The cost of maintaining the lodge for adaptive use under alternative II would depend upon contractual arrangements with the concessioner but could range up to $40,000 or more if the National Park Service maintained all of the facility.

CONSULTATION AND COORDINATION IN THE PREPARATION OF THE ENVIRONMENTAL ASSESSMENT

The major public concern expressed during the public review of the 1984 Environmental Assessment/Development Concept Plan revolved around the question of feasible alternatives for the continued use of Crater Lake Lodge. Consequently, NPS consultation and coordination efforts during the preparation of this supplement have been concentrated upon those local and national historic preservation groups that have expressed an interest in seeking a solution to that question.

Specifically, key documents, such as the architectural/engineering cost study for the rehabilitation of the lodge, have been made available to the following groups, all of which were also invited to participate in three review sessions during the cost study:

Advisory Council on Historic Preservation
Oregon State Historic Preservation Officer
Historic Preservation League of Oregon
National Trust for Historic Preservation
Oregon State Advisory Committee on Historic Preservation
Oregon Historical Society
Oregon Museums Association
Southern Oregon Historical Society
Oregon State Preservation Coordinator, American Institute of Architects, Historical Resources Committee

A considerable amount of additional and continuous consultation has also taken place, ever since the inception of the original planning effort in 1983, with four key groups: the Advisory Council on Historic Preservation, the Oregon State Historic Preservation Office, the Historic Preservation League of Oregon, and the National Trust for Historic Preservation. Meetings have been held in Seattle, Portland, Salem, Denver, and Washington, D.C. (seven in 1984, six in 1985, four in 1986, and one, so far, in 1987). The purpose of all the meetings, briefings, and correspondence has been to mutually seek the best solution for the question of Crater Lake Lodge, in conjunction with meeting the four principal National Park Service objectives for Crater Lake National Park, as outlined in this document.

Consultations will continue following release of this supplement.

Because Crater Lake Lodge is listed on the National Register of Historic Places, full consultations will continue with the Oregon state historic preservation officer and the Advisory Council on Historic Preservation prior to any NPS decision that may have an impact upon the historic structure, in accordance with the requirements of the National Historic Preservation Act, as amended, and 36 CFR part 800, "Protection of Historic Properties."

APPENDIXES

APPENDIX A: SYNOPSIS OF REPORT TO HOUSE OF REPRESENTATIVES AND CONSULTANT'S REPORT ON CRATER LAKE LODGE

In response to concerns expressed by the House of Representatives Subcommittee on Public Lands and National Parks (September 1984), the National Park Service sought an independent and outside study to explore the costs of a "rustic rehabilitation" of the Crater Lake Lodge in comparison to those of the proposed "first class" rehabilitation previously estimated by the Park Service. The study was completed by a Portland, Oregon, architectural firm (BOOR/A) in January 1986.

The study of the lodge prepared by BOOR/A and consultants was directed at rehabilitating the lodge to rustic standards. Essentially, this meant the economical repair and/or replacement of defective building elements to meet code and operational requirements for the practical continued use of the facility in its current internal configuration. The study was designed to array rehabilitation costs by building section and component to give the Park Service more information to explore possible adaptive uses of the lodge. The study also explored the implications of extending the current 90-day operating season to 150 days. All study recommendations were required to conform to the secretary's standards and guidelines for treating historic structures.

The study conducted by the A/E (architect/engineer) confirmed earlier studies, concluding that the lodge is of poor initial structural design, has always provided rather meager accommodations, and would require major rehabilitation if it is to continue to be used as a public lodging facility. The A/E found that even rehabilitation to rustic lodging standards would require complete replacement of the electrical system, replacement of most of the mechanical system, and major structural renovation. Basic construction costs for rehabilitation of the structure are estimated at $5.4 million, exclusive of interior furnishings, landscaping/site work, professional fees, and other associated project costs. It was determined that the cost difference between a 20- and 40-year life cycle and the implications of extending the operating season did not significantly affect the project costs. Total estimates reflect a 40-year life cycle, which is the same cost basis that was used in earlier Park Service studies. Highlights of the principal findings of the A/E are summarized below.

Structural - Required structural improvements account for over $2.4 million of the total estimate. New structural systems designed to carry major loads and to provide earthquake and wind load protection in conjunction with existing structural systems are recommended for most parts of the original building and the roof and diaphragm systems of the annex. Major work is required on the first-story stone walls in all building sections. Major foundation work will be required to carry newly distributed loads. The lakeside terrace and retaining wall are also in need of replacement.

Mechanical - Necessary mechanical system improvements are estimated to cost $638,622 and include the following: rehabilitation of the existing

oil-fired steam radiation system for reuse in the lobby, great hall, and dining room, and electric baseboard heat to replace existing space heaters in all guest rooms under the 20-year life cycle (or a hot water radiation system for the entire building in the 40-year cycle); replacement of all above-grade waste and water lines; replacement of the existing hot water storage tank; new ventilation systems throughout; and code compliance improvements to the existing insulation, boiler, drainage, and fire protection systems.

Electrical - All electrical systems for the lodge are a combination of original and obsolete methods and equipment that have been extended over the years with equipment and techniques applicable to the time of installation. The system has many defects that allow for potential hazards to personnel and presents the problem of continuous maintenance and repair of antique equipment. Total replacement of the building's electrical system is estimated to cost $762,149.

Architectural - The exterior of the lodge will require replacement of some fabric to give it the 20- or 40-year life cycle called for in the project. Required structural improvements, particularly to the building's roof systems, will also necessitate major fabric replacement and repair. Similar conditions hold true for the interior of the lodge. Few wall, ceiling, or floor surfces are in a condition or of significance so that repair and reuse would be warranted. Few existing surface treatments meet current codes. Major structural improvements required call for the total removal of most finish surfaces as well as some subsurface materials for structural repairs to occur. Total architectural improvements are estimated at $1,314,645.

Cost Summary - The $5,413,433 total estimated cost figure found on page 36 of volume one of the A/E report assumes the summer of 1989 as a midpoint of construction and provides an escalation factor of 10 percent (2.5 percent per year for four years). Appropriate overhead and profit costs were included for individual disciplines, as well as a 5 percent remote location factor across the board. Because of the unusual nature of the project, the report recommends that at least a 10 percent contingency be added to the total estimated cost. The above estimated cost does not include the contingency, landscaping/site work, interior furnishings, professional fees, and other associated costs.

In comparing the A/E cost study with the earlier (1984) study made by the Denver Service Center (DSC) of the National Park Service, adjustments were required because of the difference in the projected year of construction. Both DSC and A/E costs were adjusted to 1985, the year of the study by the A/E. The A/E 10 percent escalation figure was removed and the DSC cost figure was increased by 3 percent to reflect a one-year escalation from the 1984 figures. (DSC generally uses a higher escalation factor than BOOR/A.) The same line-item figures were used in both reports for landscaping/site work ($350,000), furnishings ($150,000), and contingency (10 percent).

After making the above adjustments to the two project totals, there is about a $700,000 difference between the adjusted A/E estimate of

approximately $5.8 million and the DSC estimate of approximately $6.5 million. This figure is largely because there were major differences in approach between the two studies for resolution of major structural problems and historic appearance for the rehabilitation of the great hall. (The A/E approach would insert columns at 12 feet on center, whereas the DSC approach would have maintained the clear span of the space.) The studies presented two very different rehabilitation approaches with two very different end products. However, the cost of each would be similar. The primary difference between the two studies was in the style of rooms to be provided (therefore affecting the total number of rooms--108 (A/E) versus 56 (DSC)--and the cost per room). It should also be noted that portions of the lodge are currently used for employee quarters. If the lodge were renovated exclusively for guest quarters, there would be an additional cost to provide employee housing elsewhere.

Conclusion

The new study confirms earlier Park Service conclusions that the lodge is in a condition that will necessitate the replacement of both the mechanical and electrical systems, as well as major structural and architectural repairs. The study found the costs of these improvements to be comparable with those of the earlier DSC estimate.

The full report is available at park headquarters and at the regional office.

APPENDIX B: SUMMARY OF PROJECTED DEVELOPMENT COSTS

The following preliminary cost estimates are based on conceptual designs and will be revised as design progresses. All costs have been escalated to fiscal year 1991. It is recognized that the various projects will be phased, with some occurring, possibly, as early as fiscal year 1990 and some after fiscal year 1991. Phased construction could affect cost estimates.

The cost estimates are based on replacing the existing cafeteria building with new facilities.

The option of remodeling the cafeteria building to serve as a combined day use facility and interpretive center is being considered; however, preliminary studies indicate that a remodeled facility would serve neither function well and would complicate the winter problems as evidenced in the wind tunnel tests. Under alternatives II through IV, the day use facilities are combined with the new lodge and a new interpretive center is provided on the site of the cafeteria building; the cost difference between new facilities and remodeling is relatively small under these alternatives. Under alternative I, where the plan provides both a new day use facility (but not a new lodge) and a new interpretive center, the costs would be considerably higher. It should be noted that the design of the parking area would have to be modified if the decision is made to retain and remodel the existing structure.

Table B-1: Cost Estimates

Alternative I--Rehabilitate Existing Lodge; Construct New Day Use Facilities and Interpretive Center		1991 Gross Construction Costs	Advance and Project Planning Costs	Total Project Costs
Rim Village	Rehabilitate Crater Lake Lodge (±80 rooms/dining)	$ 8,980,000	$ 1,714,000	$10,694,000
	Construct day use facilities	3,370,000	643,000	4,013,000
	Remove cafeteria building and construct interpretive center	4,212,000	804,000	5,016,000
	Subtotal Structures	$16,562,000	$ 3,161,000	$19,723,000
	Site work: access road, parking (±200 cars), walks, lighting, retaining walls, planting, demolition	1,298,000	248,000	1,546,000
	Site work: rehabilitate existing lodge grounds, parking area (100 cars), access road (.3 mile)	970,000	185,000	1,155,000
	Connect Rim Village to Munson Valley wastewater treatment system; repair existing sewer to lodge	2,205,000	421,000	2,626,000
Mazama Area	Roads, utilities, and site development for cabins and camper service facility; rehabilitate gas station site	Under construction		
	Roads, utilities, and site development for cabin expansion	354,000	68,000	422,000
	Subtotal Site Work/Utilities	$ 4,827,000	$ 922,000	$ 5,749,000
	Total Estimated Cost - Alternative I	$21,389,000	$ 4,083,000	$25,472,000
Alternative II: Rehabilitate Existing Lodge (Annex Removed) for Adaptive Use; Construct New Lodge/Day Use Facility and Interpretive Center				
Rim Village	Remove annex and rehabilitate lodge (dining/exhibits)	$ 4,323,000	$ 825,000	$ 5,148,000
	Construct 90-room lodge/garage/day use facility	14,791,000	2,823,000	17,614,000
	Remove cafeteria building and construct interpretive center	4,212,000	804,000	5,016,000
	Subtotal structures	$23,326,000	$ 4,452,000	$27,778,000
	Site work: access road, parking (±200 cars), walks, lighting, retaining walls, planting, demolition	$ 1,298,000	$ 248,000	$ 1,546,000
	Site work: rehabilitate existing lodge grounds, parking area (30 cars), access road (.3 mile)	943,000	180,000	1,123,000
Mazama Area	Connect Rim Village to Munson Valley wastewater treatment system; repair existing sewer to lodge	2,205,000	421,000	2,626,000
	Roads, utilities, and site development for cabins and camper service facility; rehabilitate gas station site	Under construction		
	Roads, utilities, and site development for cabin expansion	354,000	68,000	422,000
	Subtotal Site Work/Utilities	$ 4,800,000	$ 917,000	$ 5,717,000
	Total Estimated Cost - Alternative II	$28,126,000	$ 5,369,000	$33,495,000

Alternative III: Rehabilitate Existing Lodge (Annex Removed) for Lodging; Construct New Lodge/Day Use Facility and Interpretive Center		1991 Gross Construction Costs	Advance and Project Planning Costs	Total Project Costs
Rim Village	Remove annex and rehabilitate lodge (±30 rooms/ dining)	$ 6,026,000	$ 1,150,000	$ 7,176,000
	Construct ±60-room lodge/garage/day use facility	12,863,000	2,455,000	15,318,000
	Remove cafeteria building and construct interpretive center	4,212,000	804,000	5,016,000
	Subtotal Structures	$23,101,000	$ 4,409,000	$27,510,000
	Site work: access road, parking (±200 cars), walks, lighting, retaining walls, planting, demolition	$ 1,298,000	$ 248,000	$ 1,546,000
	Site work: rehabilitate existing lodge grounds, parking area (50 cars), access road (.3 mile)	977,000	186,000	1,163,000
Mazama Area	Connect Rim Village to Munson Valley wastewater treatment system; repair existing sewer to lodge	2,205,000	421,000	2,626,000
	Roads, utilities, site development for cabins and camper service facility; rehabilitate gas station site	Under construction		
	Roads, utilities, and site development for cabin expansion	354,000	68,000	422,000
	Subtotal Site Work/Utilities	$ 4,834,000	$ 923,000	$ 5,757,000
	Total Estimated Cost - Alternative III	$27,935,000	$ 5,332,000	$33,267,000
Alternative IV: Construct New Lodge/Day Use Facility and Interpretive Center; Remove Existing Lodge				
Rim Village	Construct 90-room lodge/garage/day use facility	$14,791,000	$ 2,823,000	$17,614,000
	Remove cafeteria building and construct interpretive center	4,212,000	804,000	5,016,000
	Subtotal Structures	$19,003,000	$ 3,627,000	$22,630,000
	Site work: access road, parking (±200 cars), walks, lighting, retaining walls, planting, demolition	$ 1,298,000	$ 248,000	$ 1,546,000
	Remove existing lodge; restore grounds and parking area	721,000	138,000	859,000
Mazama Area	Connect Rim Village to Munson Valley wastewater treatment system; repair existing sewer to lodge	2,205,000	421,000	2,626,000
	Roads, utilities, and site development for cabins and camper service facility; rehabilitate gas station site	Under construction		
	Roads, utilities, and site development for cabin expansion	354,000	68,000	422,000
	Subtotal Site Work/Utilities	$ 4,578,000	$ 875,000	$ 5,453,000
	Total Estimated Cost - Alternative IV	$23,581,000	$ 4,502,000	$28,083,000

Table B-2: Summary of Cost Estimates

Summary		Total Project Cost
Alternative I*	Rehabilitate existing lodge (±80 rooms)	$10,694,000
	Construct day use facilities	4,013,000
	Construct interpretive center	5,016,000
	Access roads, parking, utilities, walks, lighting, retaining walls, planting, demolition	5,749,000
	Total Alternative I	$25,472,000
Alternative II*	Remove annex; rehabilitate lodge (dining/exhibits)	$ 5,148,000
	Construct 90-room lodge/garage/day use facility	17,614,000
	Construct interpretive center	5,016,000
	Access roads, parking, utilities, walks, lighting, retaining walls, planting, demolition	5,717,000
	Total Alternative II	$33,495,000
Alternative III*	Remove annex; rehabilitate lodge (±30 rooms/dining)	$ 7,176,000
	Construct ±60-room lodge/garage/day use facility	15,318,000
	Construct interpretive center	5,016,000
	Access roads, parking, utilities, walks, lighting, retaining walls, planting, demolition	5,757,000
	Total Alternative III	$33,267,000
Alternative IV*	Construct 90-room lodge/garage/day use facility	$17,614,000
	Construct interpretive center	5,016,000
	Access roads, parking, utilities, walks, lighting, retaining walls, planting, demolition (including removal of existing lodge)	5,453,000
	Total Alternative IV	$28,083,000

Note: Estimates do not include any concessioner costs for camper store, cabins, employee housing, or NPS costs to acquire concessioner possessory interest and compensate for loss of business. Furnishings, exhibits, and special equipment are not included.

The following options are being considered and are not included in the basic cost estimates	Advance Total Project Costs
Construct overflow parking area - 150 spaces	351,000
Construct overflow parking area - 300 spaces	703,000
Construct alternate access road - .23 mile	530,000
Construct comfort station in picnic area	155,000

*Remodeling/expanding existing cafeteria building for interpretive center and day use facility would reduce total project cost by $578,000 (alternatives II through IV) and by $2,525,000 under alternative I.

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Architect/ Planners, Portland, Oregon
Contract for analysis of the problems and costs of renovating the existing lodge.

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COMMENTS

The alternatives being considered are as follows:

ALTERNATIVE I—The existing lodge would be fully rehabilitated, providing about 80 rooms with baths. Lodging in the Rim Village would be available only in the summer.

ALTERNATIVE II—A new 90-room lodge would be constructed in the Rim Village. It would be open year-round. The existing lodge would be reduced in size by removing the 1922 annex and would be converted to an exhibit center (with emphasis on park history) and a fine dining room, which would be open during the summer only.

ALTERNATIVE III—A new 60-room lodge would be constructed in the Rim Village. It would be open year-round. The existing lodge would be reduced in size by removing the 1922 annex and rehabilitated to provide about 30 rustic guest rooms and a fine dining room, which would be open during the summer only.

ALTERNATIVE IV—A new 90-room lodge would be constructed in the Rim Village. It would be open year-round. The existing lodge would be removed when the new facilities were completed.

Please rate **each** of the above alternatives. **Circle one response for each alternative.**

Q-1	Alternative I	EXCELLENT	GOOD	FAIR	POOR	UNACCEPTABLE	UNDECIDED
Q-2	Alternative II	EXCELLENT	GOOD	FAIR	POOR	UNACCEPTABLE	UNDECIDED
Q-3	Alternative III	EXCELLENT	GOOD	FAIR	POOR	UNACCEPTABLE	UNDECIDED
Q-4	Alternative IV	EXCELLENT	GOOD	FAIR	POOR	UNACCEPTABLE	UNDECIDED

Q-5 Please rank each of the alternatives in terms of their desirability as development concepts for Crater Lake National Park. **Rank each alternative number in the appropriate box below. If you are undecided about each alternative, check here** ☐ **and go to the next question.**

- ☐ MOST DESIRABLE
- ☐ SECOND MOST DESIRABLE
- ☐ THIRD MOST DESIRABLE
- ☐ LEAST DESIRABLE

Q-6 Is there another alternative for the improvement of lodging and dining facilities at Crater Lake National Park that you would prefer over the four above alternatives? **Circle one number.**

1 No Go to Q-8

2 Yes Go to Q-7

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Q-7 If you answered yes to Q-6, please describe the alternative that you prefer below. **Please be as specific as possible.**

Visitor opinions about park use need to be included in finalizing the Development Concept Plan. The next questions ask for your opinions about the importance of various objectives of park development.

In your opinion how important should each of the following objectives be in finalizing the Development Concept Plan for Crater Lake National Park?

		Circle one response for each alternative			
Q-8	Providing higher quality interpretive facilities at Crater Lake	VERY IMPORTANT	MODERATELY IMPORTANT	SOMEWHAT IMPORTANT	NOT IMPORTANT
Q-9	Providing year-round interpretive programs at Rim Village	VERY IMPORTANT	MODERATELY IMPORTANT	SOMEWHAT IMPORTANT	NOT IMPORTANT
Q-10	Providing year-round interpretive programs at Munson Valley	VERY IMPORTANT	MODERATELY IMPORTANT	SOMEWHAT IMPORTANT	NOT IMPORTANT
Q-11	Providing interpretive facilities focusing on park history	VERY IMPORTANT	MODERATELY IMPORTANT	SOMEWHAT IMPORTANT	NOT IMPORTANT
Q-12	Providing interpretive facilities focusing on environment	VERY IMPORTANT	MODERATELY IMPORTANT	SOMEWHAT IMPORTANT	NOT IMPORTANT
Q-13	Improving quality of overnight lodging in the park	VERY IMPORTANT	MODERATELY IMPORTANT	SOMEWHAT IMPORTANT	NOT IMPORTANT
Q-14	Providing year-round lodging at Rim Village	VERY IMPORTANT	MODERATELY IMPORTANT	SOMEWHAT IMPORTANT	NOT IMPORTANT
Q-15	Providing year-round lodging at Munson Valley	VERY IMPORTANT	MODERATELY IMPORTANT	SOMEWHAT IMPORTANT	NOT IMPORTANT
Q-16	Ensuring that overnight lodging (cabins, lodge) exists in a variety of price ranges	VERY IMPORTANT	MODERATELY IMPORTANT	SOMEWHAT IMPORTANT	NOT IMPORTANT
Q-17	Maintaining road access to the Rim Village area in the winter	VERY IMPORTANT	MODERATELY IMPORTANT	SOMEWHAT IMPORTANT	NOT IMPORTANT
Q-18	Minimizing visual intrusions (roads, parking, and structures) in and around the Rim Village	VERY IMPORTANT	MODERATELY IMPORTANT	SOMEWHAT IMPORTANT	NOT IMPORTANT
Q-19	Minimizing environmental impacts that could affect the Crater Lake ecosystem	VERY IMPORTANT	MODERATELY IMPORTANT	SOMEWHAT IMPORTANT	NOT IMPORTANT

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Q-20 Which three of the above objectives (Q-8 to Q-19) are most important to you in finalizing the development concept plan for Crater Lake National Park? **Please rank by putting the question number in the appropriate boxes below.**

- ☐ MOST IMPORTANT
- ☐ SECOND MOST IMPORTANT
- ☐ THIRD MOST IMPORTANT

Q-21 Please make any other comments you have about Crater Lake National Park in the open space below.

Name:

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Organization (optional):

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ADDITIONAL COMMENTS

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As the nation's principal conservation agency, the Department of the Interior has basic responsibilities to protect and conserve our land and water, energy and minerals, fish and wildlife, parks and recreation areas, and to ensure the wise use of all these resources. The department also has major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

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